C&IM Hot Sprays Gons for Long Life

December 15, 1958

RAILWAY AGE *weekly*

McCARTNEY LIBRARY
GENEVA COLLEGE

RD58 1116
McCARTNEY LIBRARY
GENEVA COLLEGE
BEAVER FALLS PA

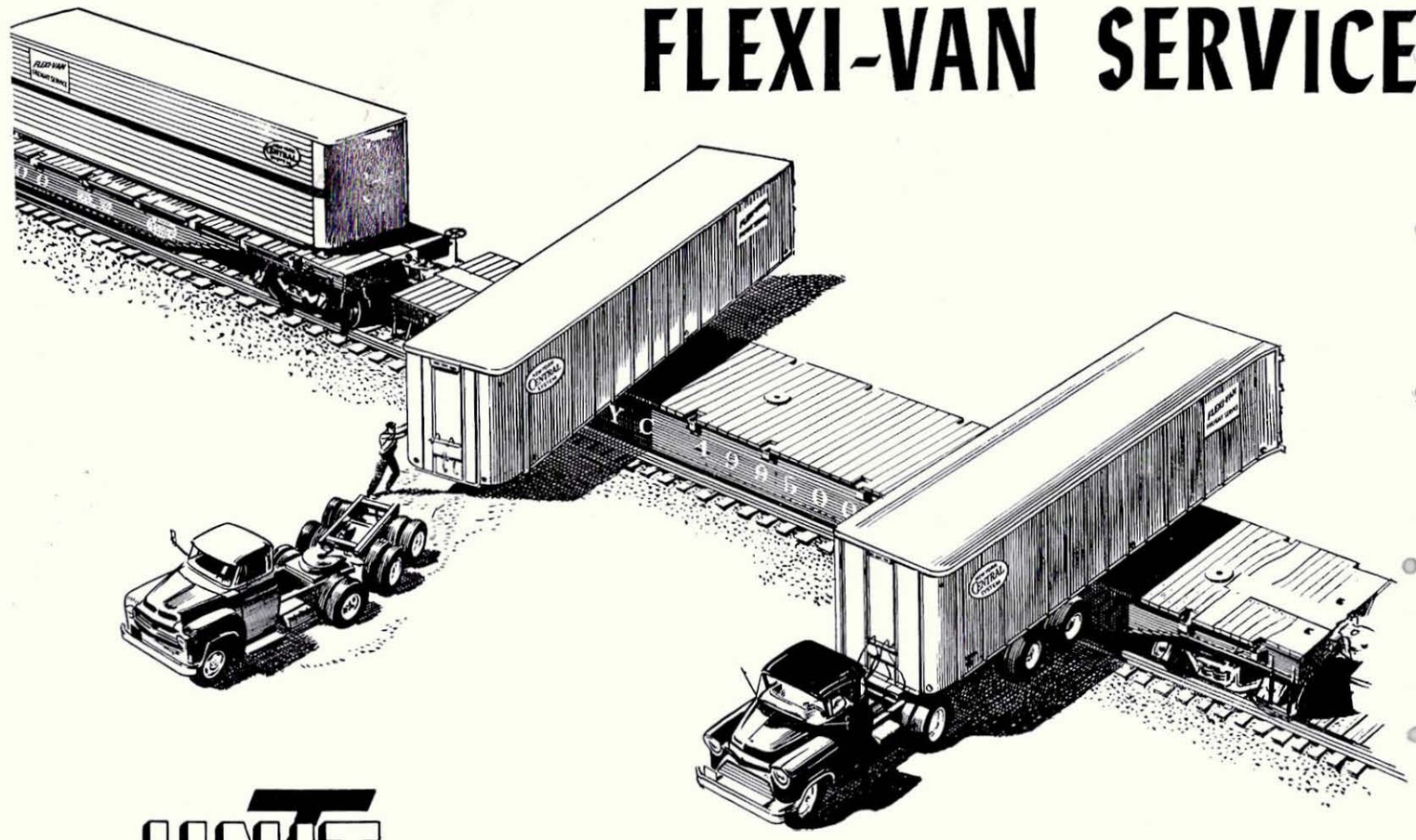
Money Makes Money

How 5 railroads get fast returns on new equipment

60 cents A Simmons-Boardman TIME-SAVER Publication

NEW YORK CENTRAL GIVES

FLEXI-VAN SERVICE



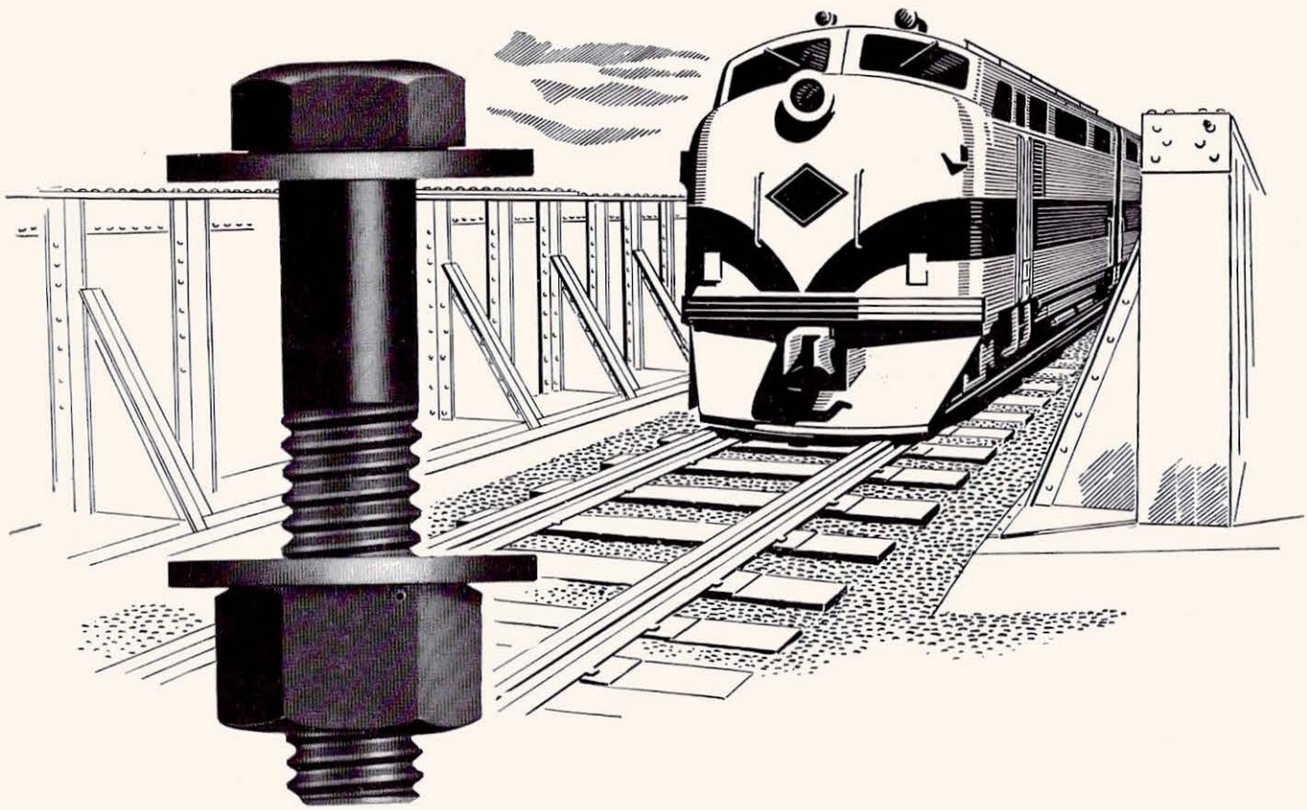
UNIT TRUCK ... THE WORLD'S MOST DEPENDABLE BRAKING SYSTEM

New York Central built *dependability* into the initial 75 Flexi-Van Rail-Highway Service cars by specifying "Buffalo" Unit brake beams for all but one of these cars.*

For specialized service cars—where freedom from maintenance delays is a *must* for fast, on time performance—most railroads depend on "Buffalo" for top brake beam performance.

*One car is equipped with ultra-modern off-wheel disc braking provided by "Buffalo" Brake-X.

BUFFALO BRAKE BEAM COMPANY ★ UNIT TRUCK CORPORATION



Vibration won't loosen High-Strength Bolts

Vibration day after day won't loosen structural connections in bridges when they're joined with Bethlehem High-Strength Bolts. These bolts hold their full clamping force indefinitely. Even after months of service they are generally as tight as the day they were installed.

And they're easy to install, too. The bolts are used with two hardened washers, to permit the development of maximum clamping force. The nut is driven up on the bolt to predetermined tension by means of a pneumatic impact wrench, an operation which takes just a few seconds. Tightening of the nut can also be done with a hand spanner.

Bethlehem High-Strength Bolts are made of a good grade of carbon steel, and are quenched and tempered to meet the requirements of ASTM Specification A-325.

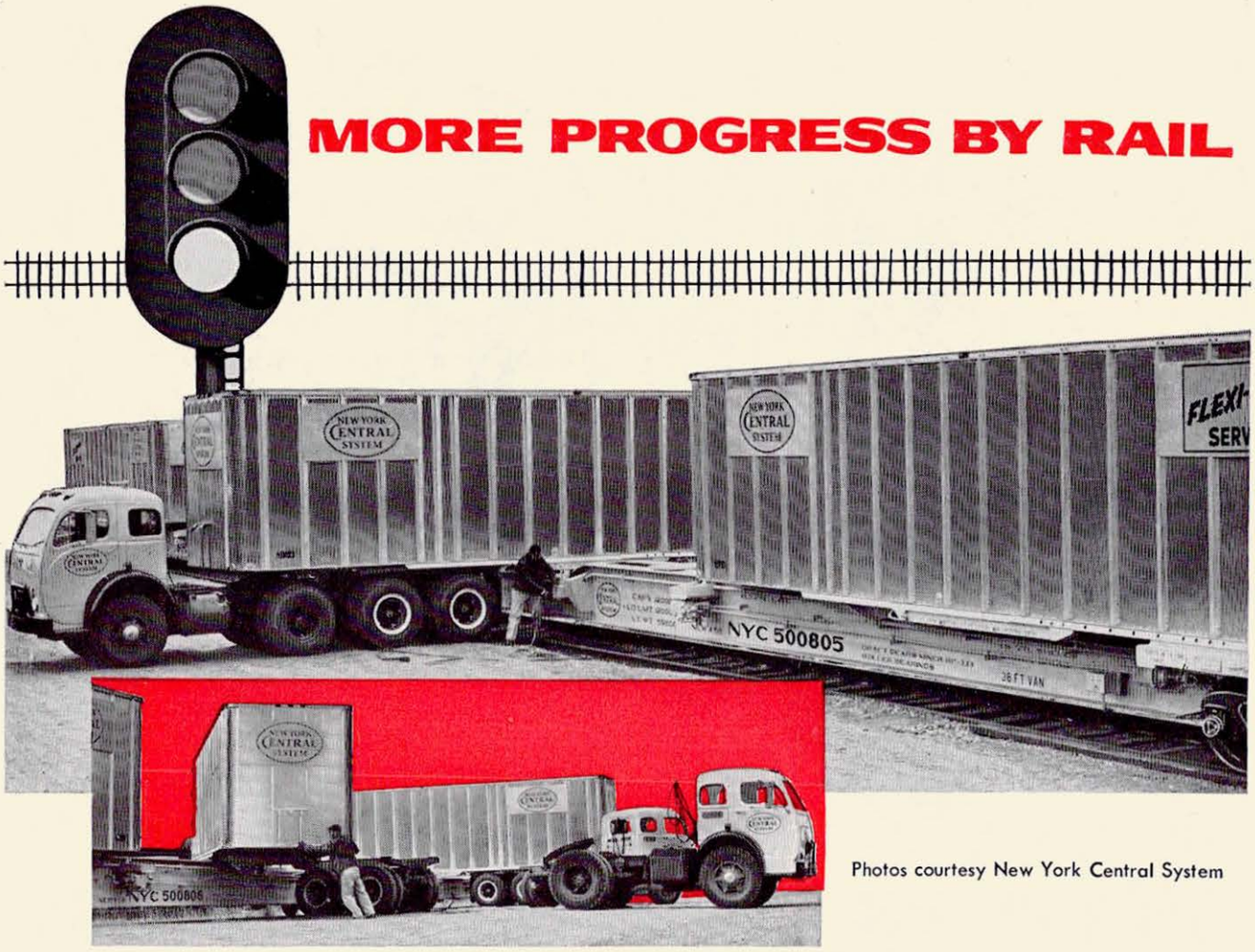
Bethlehem High-Strength Bolts come in all lengths and diameters commonly used in steel erection. They're well worth considering for your construction program. If you would like to have full details, get in touch with Bethlehem's nearest sales office.

BETHLEHEM STEEL COMPANY
BETHLEHEM, PA.

On the Pacific Coast Bethlehem products are sold by Bethlehem Pacific Coast Steel Corporation
Export Distributor: Bethlehem Steel Export Corporation

BETHLEHEM STEEL

MORE PROGRESS BY RAIL



Photos courtesy New York Central System

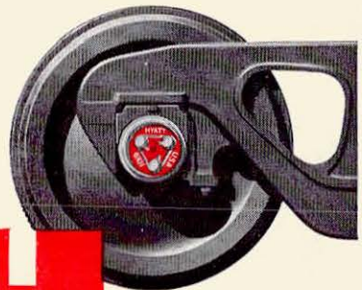
NEW "TURNTABLE PIGGYBACK" CARS WITH HYATT HY-ROLL ROLLER BEARINGS!

Another GM GENERAL MOTORS contribution to railroad progress

Now freight by the highway trailer load can "hitch" speedy, economical train rides faster and easier than ever before!

This new "Flexi-Van" service utilizes 900 trailer bodies, 150 wheel-and-axle assemblies and 150 special railroad cars. Each 81-ft. flatcar has two hydraulically operated turntables which enable trailer bodies to be quickly slid aboard from the side, turned and locked in position in just 4 minutes—eliminating need for driving tractors up onto cars, and consecutive loading or unloading. Naturally, many of these ultra-modern cars are equipped with HYATT Hy-Rolls for fast, smooth, delay-free runs at lower maintenance cost.

When you order new freight cars to improve your service, *make sure they're modern where it counts the most: the bearings the revenue rolls on!* Hyatt Bearings Division, General Motors Corporation, Harrison, N. J.



HIGH-BALL with HY-ROLL

NOW AVAILABLE FOR SHOWING—educational, new 20-minute color-sound motion picture dramatizing modern railroad progress. Write today for loan of film.

HYATT HY-ROLL BEARINGS
FOR NON-STOP FREIGHT

RAILWAY AGE *weekly* December 15, 1958 • Vol. 145, No. 24

Week at a Glance

Departments

Current Questions	15
Freight Car Loadings	47
New Equipment	47
New Products Report	44
People in the News	50
Railroading After Hours	25
Railway Market	47
Supply Trade	50
The Action Page	54
Watching Washington	10
You Ought to Know	52

Editorial and Executive Offices
• New York 7, 30 Church St.

JAMES G. LYNE, Editor
ROBERT G. LEWIS, Publisher

Executive Editor ..... Joe W. Kizzia
Managing Editor ..... Fred C. Miles
News Editor ..... Luther S. Miller
Traffic-Transportation ... G. C. Hudson
Mechanical
C. L. Combes F. N. Houser, Jr.
Signaling & Communications
Robert W. McKnight Robert J. Barber
Associate Editors
R. H. Craib Harry M. Grayson, Jr.
Librarian ..... Edith C. Stone
Editorial Assistant ..... June Meyer
Art Director ..... Russell F. Rypsam
Design and Layout ..... Joel Petrower

• Chicago 3, 79 West Monroe St.

Western Editor .... Wallace W. Abbey
Regional News ..... Gus Welty
Mechanical ..... Norman E. Gillespie
Engineering ..... M. H. Dick
R. E. Dove E. W. Hodgkins, Jr.
Purchases & Stores ..... R. M. Schmidl
Signaling & Communications..J. H. Dunn
Editorial Assistant ..... Wanda Brown

• Washington 4, National Press Bldg.

Washington Editor ..... Walter J. Taft

ABC

Railway Age, established in 1856, is indexed by the Industrial Arts Index, the Engineering Index Service and the Public Affairs Information Service. Name registered in U.S. Patent Office and Trade Mark Office in Canada.
Published weekly by the Simmons-Boardman Publishing Corporation at 440 Boston Post Road, Orange, Conn. Second-class postage paid at the Post Office of Orange, Conn. James G. Lyne, chairman of the board, Arthur J. McGinnis, president and treasurer, F. A. Clark, vice-president and secretary. George Dusenbury, vice-president and editorial and promotion director.

RRs seek gains in pricing, service ..... p. 9

Western railroads are making quick moves to use lower rates and faster service as powerful competitive weapons. Chicago-West Coast schedules are being sliced to 60 hours; the Soo Line is ready to go with a guaranteed rate.

UP has big plans for IBM 705 ..... p.12

The giant electronic computer recently began the first of many cost-cutting jobs the road's officers have laid out for it. The "brain" produces data faster, more accurately. Here's why UP officers figure that, despite the 705's high rental, it's well worth the price.

Do experiments attract passengers? p.20

The past year may have seen more innovations designed to attract railroad passengers than any comparable period since the advent of the streamliner. Among the railroads willing to experiment, there doesn't seem to be a loser. This article, second in a Railway Age series, analyzes some of the year's innovations.

EMD introduces two new diesels p.24

One of the locomotives is a 2,400-hp supercharged unit built to speed tonnage freight trains. The other is an 800-hp lightweight aimed at the export market. Tests indicate that the 2,400-hp unit can take a tonnage train over level ground 16 per cent faster than existing locomotives.

C&IM sprays gons for long life p.26

The railroad has been experimenting with hot and cold spray paint applications on its gondola cars. The hot spray method, the C&IM has decided, will be used exclusively from now on.

Tie spacers work fast, cut costs p.32

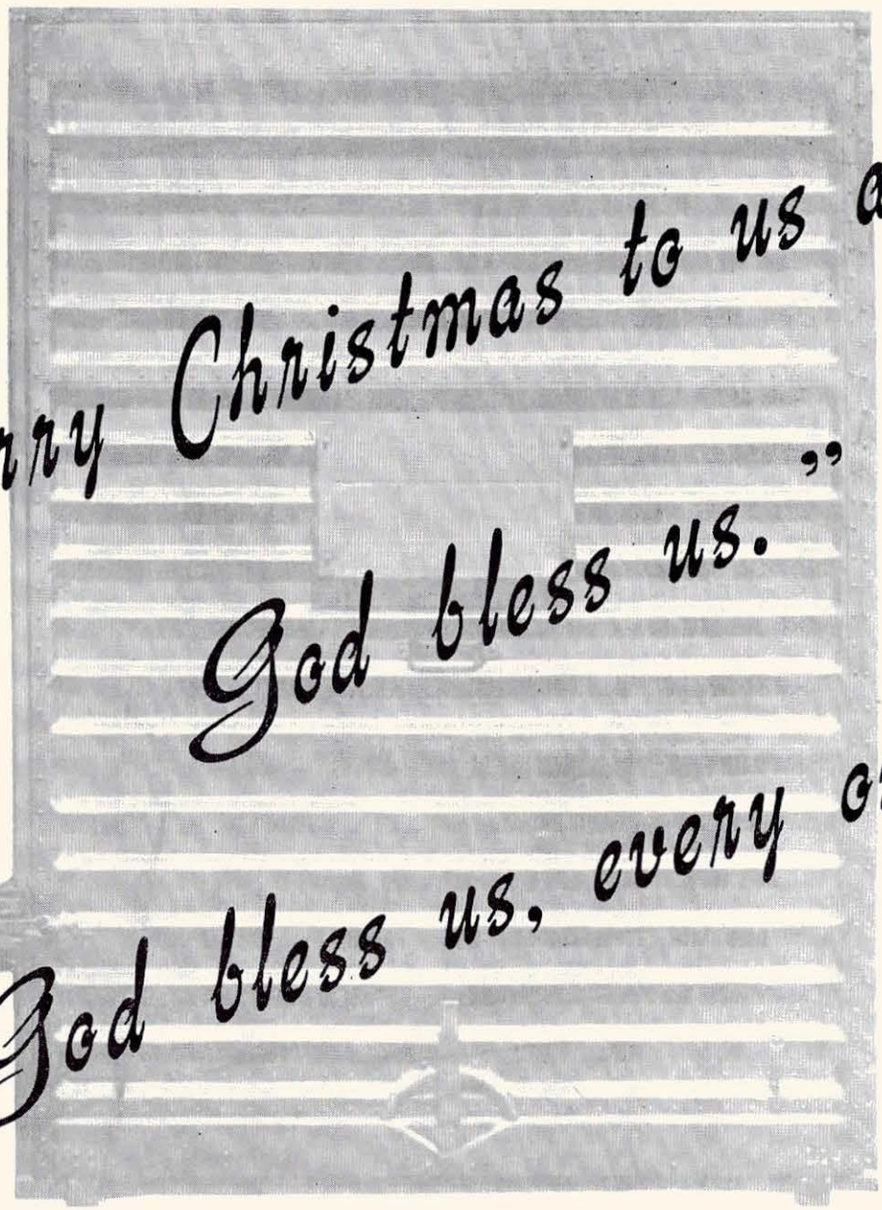
The C&NW used mechanical tie spacers this year for the first time. Two machines operating as a team, the road found, sharply increase the rate at which crosstie respacing is performed. Moreover, the work can be done with fewer men.

Money makes money p.36

Capital improvements can pay for themselves. Many signaling projects reduce annual expenses, improve operations, and bring in an excellent return long after they've paid for themselves.

Italy pushes electrification p.40

Half the nation's 10,000 route-miles of railway soon will be electrically operated. Meantime, diesels are rapidly replacing steam on lines not scheduled to be electrified.



"Merry Christmas to us all---
God bless us."
"God bless us, every one."

YOUNGSTOWN STEEL DOOR COMPANY

CAMEL SALES COMPANY • CAMEL COMPANY LIMITED

Cleveland • Chicago • New York • Youngstown

Week at a Glance CONT.

Current Statistics

Operating revenues, ten months	
1958	$7,915,861,843
1957	8,849,242,926
Operating expenses, ten months	
1958	6,264,212,714
1957	6,887,241,951
Taxes, ten months	
1958	795,205,668
1957	935,034,011
Net railway operating income, ten months	
1958	602,964,606
1957	799,405,232
Net income estimated ten months	
1958	450,000,000
1957	620,000,000
Average price 20 railroad stocks	
Dec 9, 1958	103.04
Dec. 10, 1957	63.35
Carloadings revenue freight	
Forty-eight weeks, 1958	28,020,306
Forty-eight weeks, 1957	33,279,260
Average daily freight car surplus	
Wk. ended Dec. 6, 1958	30,649
Wk. ended Dec. 7, 1957	40,271
Average daily freight car shortage	
Wk. ended Dec. 6, 1958	469
Wk. ended Dec. 7, 1957	34
Freight cars on order	
November 1, 1958	23,670
November 1, 1957	65,718
Freight cars delivered	
Ten months, 1958	36,255
Ten months, 1957	84,639

•

Advertising Sales Department

Duane C. Salisbury—vice-president, director of sales

New York 7, N. Y., 30 Church st., WOrth 4-3060
J. S. Vreeland—vice-president; F. T. Baker—district manager; W. E. Glasby; J. C. Lyddy
Chicago 3, Ill., 79 W. Monroe st., RAndolph 6-0794
J. R. Thompson—vice-president; J. W. Crossett—district manager; J. D. Dolan—district manager

Cleveland 15, Ohio, 1501 Euclid ave., MAin 1-4455
H. H. Melville—vice-president; H. M. Blunt
Philadelphia, Pa., Jericho Manor, Jenkintown, Pa. TUrner 7-4526
W. E. Glasby—district manager
Pittsburgh 19, Pa., Suite 203, Carlton House, GRant 1-8186
C. J. Fisher—district manager
Atlanta 9, Ga., 22 Eighth st., N. E., TRinity 2-6720
J. S. Crane
Dallas 19, Tex., 3908 Lemmon ave., LAkeside 2322
Joseph Sanders
Los Angeles 17, Cal., 1151 W. Sixth st.
MAdison 6-0553
Fred Klaner, Jr.; B. J. Erickson
Portland 5, Ore., 1220 S. W. Morrison, CApitol 7-4993
L. B. Conaway
San Francisco 4, Cal., 244 California st.
GArfield 1-7004
Lewis Vogler
London E. C., 1 Eng., 8/9 Clerkenwell Green
Sibley-Field Publishing Co., Ltd.
Frankfort am Main (16), West Germany
Wittelsbacher Allee 60
Georg J. Linder, Continental European Representative

•

Subscription to railroad employees only in U.S. possessions, Canada and Mexico, $4 one year, $6 two years, payable in advance and postage paid. To railroad employees elsewhere in the western hemisphere, $10 a year, in other countries, $15 a year. Single copies 60¢ except special issues. Address all subscriptions, changes of address, and correspondence concerning them to: Subscription Dept., Railway Age, Emmett St., Bristol, Conn.

Circulation Dept.: R. C. Van Ness, Director of Circulation, 30 Church St., New York 7, N. Y.

POSTMASTER—SEND FORM 3579 to EMMETT ST., BRISTOL, CONN.

RRs warned: Unify or die p.41

Lack of unity among railroads—particularly with regard to rates and service—is permitting the trucks to ride off with the cream of the traffic, says one eastern officer. Railroads, he fears, are better at competing with each other than with other modes of transportation.

Week's equipment orders total $50 million p.47

Railroad suppliers last week were getting solid evidence that the industry is looking to better days. Equipment orders reported to Railway Age came to over $50 million. Major items: more than 3,000 freight cars, 114 locomotives.

Will '59 bring commuter answer? p.48

Commuter lines are pressing to get something done about their mounting deficits—or else. The Lackawanna says it must drop commuter service unless it gets relief from all taxes on transportation property.

The action Page—Push the search for talent p.54

Today's railroad officers are responsible for finding, training and bringing along successors, not only to themselves, but at all levels in the company. There is increasing evidence that the matter of tomorrow's management is getting the attention it deserves.

Short and Significant

The GN-NP-CB&Q-SP&S consolidation study . . .

continues to progress—but slowly. The roads had hoped to have a proposal ready by the end of 1958. Now it seems unlikely that the completed study will be ready by annual-meeting time next spring. Financial aspects of the merger are the biggest items delaying action.

Compulsory arbitration in labor disputes . . .

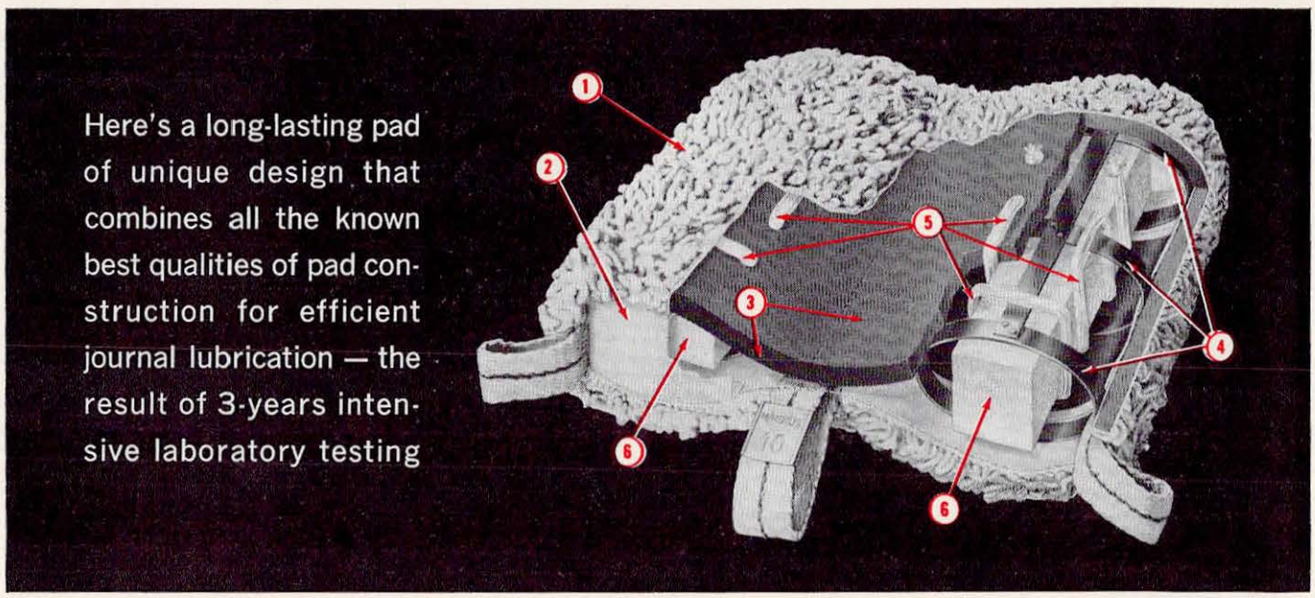
is being sought by twelve Canadian roads. They propose: first, mediation by a labor expert. This failing, there would be hearings by a special board of three top-ranking Cabinet-named judges, followed by a 14-day period of negotiation. If all else fails, this board of "final determination" could issue a binding report. The railways also suggest that new contract demands be served 120 days ahead of expiration dates instead of the present 60.

Rock Island's dual station program . . .

has been approved, in large part, by the Iowa Commerce Commission. Of 57 stations in the original proposal, 26 may be dualized with 25 other agencies, 12 will be closed, 12 will remain as open agencies, and seven will remain open to service a dualized station. If agreements can't be reached with the ORT, Rock Island may close stations now tabbed for dualization.

IN THE NEW MAGNUS LUBRICATOR PAD

these six safety features assure an abundant supply and maximum flow of oil to the journal


Here's a long-lasting pad of unique design that combines all the known best qualities of pad construction for efficient journal lubrication — the result of 3-years intensive laboratory testing
1
2
3
4
5
6
6

What you need in a lubricator you get in the new Magnus Pad. It's a sturdy one-piece twin-lobe design — assuring long life. There's 3-way wicking from an abundant oil supply. Construction features are:

1. Outer Cover of tufted premium quality cotton yarn with heavy duck backing provides an ideal, glaze-resistant application and absorption surface. For proper fit, it is shrunk prior to assembly, and both ends are stitched to prevent raveling and bunching in service.
2. End Covers of cotton bolting cloth web assure lasting strength and flexibility, keep dust and dirt out, restrict oil loss.
3. One-Piece Felt Pad backs up the tufted cover and is sewn together to make a single pad, with twin-lobe design, that is far more rugged and has better capillarity than two separate pads.
4. Flat Steel Springs—three firmly connected springs in each lobe maintain constant and correct pressure of the pad on the journal. Scaleless tempered spring steel will not sag. The springs are firmly secured to the underside of the felt and cover and are riveted to spring steel spacer strips, positively preventing misalignment or contact of springs with journal.
5. Internal Wicks of 25-ply Bostonia provide 16 supplementary oil paths from the bottom to the top of each Magnus Lubricator Pad. Thus the design includes a combination of circumferential wicking, internal wicking and center-feed wicking.
6. Polyurethane Cores increase oil reservoir capacity, contact the internal wicks to increase oil flow.

Ask your Magnus representative to tell you more about the new Magnus Lubricator Pad. He'll gladly comply. Or write to Magnus Metal Corporation, 111 Broadway, New York 6, or 80 E. Jackson Blvd., Chicago 4, Ill.

MAGNUS

Solid Bearings

Right for Railroads
...in performance...in cost

MAGNUS METAL CORPORATION *Subsidiary of* **NATIONAL LEAD COMPANY**

RRs Seek Gains in Pricing, Service

Soo Line is ready to go with a guaranteed rate. Couple this with new 60-hour Chicago-St. Louis-West Coast schedules and it adds up to a new look for the railroads' competitive efforts.

► **The Story at a Glance: Western railroads are moving rapidly to exploit the potential of two major traffic sales weapons: lower rates and faster service.**

- **Soo Line has proposed the first in what may become a group of rates under the agreed charge principle.**
- **Western lines generally are whacking the hours from freight schedules. Sixty hours, Chicago to the West Coast, is the fastest timecard yet.**

Both propositions face tests. But railroad men seem confident that both will pay off. One thing, at least, appears certain—by these moves, re-energized western carriers are putting a new face on their competitive efforts. If the agreed charge principle is approved, if the fast schedules can be met consistently, the roads may well have the guns for a successful fight to retain—and regain—long-haul freight traffic.

Soo Line wants to inaugurate a "guaranteed rate" with a shipper of iron and steel pipe. Most western transcontinentals are cutting hotshot freight schedules to set up operation at almost passenger-train speeds. New competitive efforts are being acted upon, not merely talked about.

What Canadians know as the agreed charge finally has come upon the U. S. rail scene as Soo Line's proposed "guaranteed rate" on pipe. Farthest advanced of several essentially similar proposals, Soo's probably will become the test case transportation circles have been waiting for (RA, Nov. 3, p. 9). It's the first of several guaranteed rates Soo is readying.

Soo would provide, basically, a discount of 17.5 per cent to the shipper if he guarantees to give 90 per cent of his total tonnage to the railroad. The shipper also would have to meet certain conditions specified in the tariff. Soo's choice of the term "guaranteed rate" reflects both the agreement by the shipper as to tonnage and the provision that the railroad won't undertake to change the rate for a year.

The proposal was filed with the Western Trunk Line Committee Dec. 2. Its details also have been given to the ICC, which asked for them after hearing informally of the proposal's existence. Contrary to some published reports, a formal tariff hasn't yet been filed. Soo has chosen to handle its proposal through the WTL machinery so that as much light as possible can be shed on the idea.

"We know how this rate will affect us and the particular shipper involved," Ross L. Thorfinnson, Soo's traffic vice-president, pointed out last week. "But we probably don't know how it might affect others in the competitive picture. We want to know as much as possible about what we're getting into."

WTL's standing rate committee will report on the proposal perhaps this week. Chances are that it will then be docketed for the January meeting of WTL freight traffic managers. If so, Soo plans to amend the proposal to make the rate effective sometime in February. And the road stands ready to take independent action to publish the rate if its territorial colleagues turn thumbs down.

Specifically, the rate covers welded or seamless steel and wrought iron pipe and tubing moving in carloads from Sault Ste. Marie, Ont., to Chicago and nearby points taking Chicago rates. The rate would be $10.05 per ton, including the Ex Parte 212 increase. The existing rate of $12.18 per ton would stay in the tariff. The guaranteed rate would expire a year from its effective date unless extended. And unless the ICC ordered otherwise through a minimum rate order, it wouldn't be changed during that period.

Soo's choice of the agreed charge principle came for this reason: Nineteen months ago, it attempted to trim its rate on pipe to get the business of a new manufacturer at Sault Ste. Marie. Although the reduction was softened somewhat by rate committee action, the rate did come

From Soo Line: A Pattern for Guaranteed Rates?

Soo Line's guaranteed rate proposal contains what the road thinks could be specifications for guaranteed rates generally.

Unless specifically provided, guaranteed rates wouldn't be subject to individual lines' special services or transit rules. They would, however, be subject to switching charges and switching absorption rules and like provisions applied by individual lines to normal tariff rates. Guaranteed rates could be combined with normal tariff rates to determine charges for traffic transported beyond points to which guaranteed rates are published. Moreover:

- Shippers would notify the tariff publishing officer of their intention to use guaranteed rates.
- They would supply an indemnity bond conditioned upon payment of the normal tariff rate in the event of non-compliance with guaranteed-rate rules.
- Bills of lading would be endorsed by the shipper with an agreement to comply with all guaranteed rate rules.
- Shippers would keep a record of all tonnage transported from and to points provided with guaranteed rates.
- They would furnish an affidavit at the end of the guarantee period showing percentages of total tonnage given to each form of transport.
- A Soo Line representative would have "reasonable access" to shippers' records for verification purposes.
- If a shipper fails to comply with the rules, he would be obligated to pay the normal tariff on all shipments to which guaranteed rates had been applied.

down in October 1957 to the present $12.18 per ton. But the shipper continued to move most of his business by water.

"Sound business acumen seems to dictate that before making any further adjustments in the rate we should have concrete assurance that such action on our part is going to result in our obtaining the preponderance of the movement for rail haul," Soo argued in its proposal. "Without some guaranteed provision there would be nothing to prevent the possibility of the proposed reduced rate again becoming merely a stand-by rate to be used after the close of navigation."

Mannesman Tube Co., the shipper involved, has a dock on the Great Lakes. Presently about 80 per cent of its traffic susceptible to rail movement to the Chicago district is going by ship for transfer to barge. Soo feels that a rail rate which would insure the movement of at least 90 per cent of the tonnage would produce revenues substantially above out-of-pocket costs. Mannesman has agreed to the rate and the conditions spelled out in the proposal. If the rate is allowed to become effective, Soo stands to pick up substantial additional carloads of business while sacrificing no revenue on traffic it already has.

How widespread could guaranteed rates become? Mr. Thorfinnson said this: "The guaranteed rate has no place in ratemaking as a general rate adjustment. Its use lies only in the field where the railroads today are using specific-commodity rates, incentive-loading rates, and multiple-car rates to meet competitive transportation conditions.

"Its value to the railroad industry lies in the assurance it gives that downward rate adjustments to meet competitive transportation conditions will not unnecessarily dissipate rail revenues. It further provides assurance to the railroads that if the guaranteed rate is used there will be a certain volume of traffic which can be predicted with reasonable accuracy based upon the industry's production experience and the commitment it has made in its indemnity bond as to the per cent that will move via railroad."

Faster Freights—The guaranteed rate involves—for now—just the Soo Line. Improvements in transcontinental scheduling involve most of the major carriers in the territory, through both the Chicago and St. Louis gateways.

Chicago & North Western and Milwaukee are originating westbound merchandise trains at Chicago on a 60-hour schedule in conjunction with Union Pacific and Southern Pacific (beyond Ogden, Utah). Wabash will operate a similar train out of St. Louis, to connect with UP at Kansas City.

Chicago trains are scheduled out at 6 p.m. daily, with arrival at Council Bluffs, Iowa, at 4 a.m. first morning, 10 hours after departure. Fastest passenger trains on either C&NW or Milwaukee make the run in a little over eight hours. Average speed for the freights, on the 10-hour basis, will be about 48 mph.

The Wabash freight leaves St. Louis at 7:30 p.m., gets to UP early on the first morning. UP and SP complete the run to Los Angeles and San Francisco Bay points in time for third-morning arrival and delivery the same day. (Wabash is also setting up similar connections with other lines to provide comparable Coast deliveries).

Santa Fe, Rock Island and Burlington touched off this latest schedule improvement a few days before the 60-hour trains were announced. The three roads (in conjunction with SP, Rio Grande and Western Pacific) set up schedules providing third-evening arrival and fourth-morning delivery at Coast points. Thus far, however, there's been no rush to cut still further to the 60-hour card.

E. S. Marsh, Santa Fe president, indicated his road is "not certain just what demand there is for service of that kind on traffic that will have to close so early in the day to allow for a 6 p.m. departure . . . " The present ATSF schedule covers freight-house-to-freight-house movement of rail and forwarder merchandise.

(Two roads involved in the speedups—Santa Fe and Burlington—added emphasis

(Continued on page 49)

Watching Washington *with Walter Taft*

• **STILL AWAITING FINANCING** is the latest Retirement Act liberalizer which raised benefits 10 per cent. It was enacted in 1956 with the understanding that it would be financed by increasing payroll taxes the following year. This has not been done, despite a reminder from President Eisenhower in one of his messages to Congress.

• **PIGGYBACK LOADING** figures on the loaded-trailer basis are being sought by the AAR's Car Service Division. The matter is still in the correspondence stage, but reactions of roads which would do the reporting seem generally favorable.

PRESENT REPORTS are on the flatcar basis. While they cover revenue loadings only, they are not as informative as trailer loadings would be. That's because the report is the same for a flatcar with a load and an empty as for one with two loads.

• **MUTUAL-AID PACT** of air lines will come up for oral argument before the Civil Aeronautics Board next month. The pact is a strike-insurance agreement. It provides for payment, to a strike line, of any increased revenues, less expenses, which other lines receive as a result of the strike (RA, Nov. 10, p. 9). While considering whether or not to approve, CAB has allowed the pact to remain in effect.

RAILROADS CAN APPEAR in the proceeding. Suggestions are abroad that they might well enter a like agreement, so they easily qualify under the CAB order which invites presentations from "all interested parties." It is understood that no presentation for the industry is planned by the AAR.

UNIONS representing railroad employees may be expected to participate. Two of them are already in the case. They are the Brotherhood of Railway Clerks and International Association of Machinists which have filed formal objections to the air-line pact.

POOLING arrangement or plan for apportioning earnings is what CAB called the pact in accepting it for filing and thus agreeing to determine whether it should be approved or disapproved. As it resolves that issue, the board will consider, among other questions, whether the agreement violates the Railway Labor Act (which covers air lines), and whether it discriminates against non-participating air carriers.

• **1959 CHAIRMAN OF ICC** will be Commissioner Kenneth H. Tuggle. Under the plan of rotation, he will take over Jan. 1 as successor to Howard Freas, who will remain a member of the Commission. A former lieutenant governor of Kentucky, Mr. Tuggle has been a member of the commission since 1953.

New SAFE-CARGO®

. . . gives railroads low-cost, positive DAMAGE CONTROL

with no costly maintenance problems!

YOCAR'S SAFE-CARGO is a revolutionary minimum dunnage, anchoring system for protecting nearly all types of freight car lading . . . gives the railroads unmatched, low-cost DAMAGE CONTROL . . . has no bulky, expensive parts to service . . . offers shipper-customers time-saving loading and unloading economy! SAFE-CARGO'S flush-wall anchor pin construction means full-car anchoring efficiency . . . permits wider range of shipments, even grains; eliminating dead-heading!

- LOWER INSTALLATION
- ELIMINATES MAINTENANCE
- MORE SPACE PER CAR
- SAVES LOADING TIME

SAFE-CARGO®

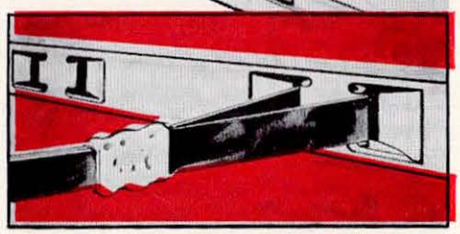
LOW-COST, POSITIVE *DAMAGE CONTROL*

SEND NOW for complete data on the SAFE-CARGO way to protect shipments from damage or ask for the YOCAR SAFE-CARGO MAN to call.

YOCAR

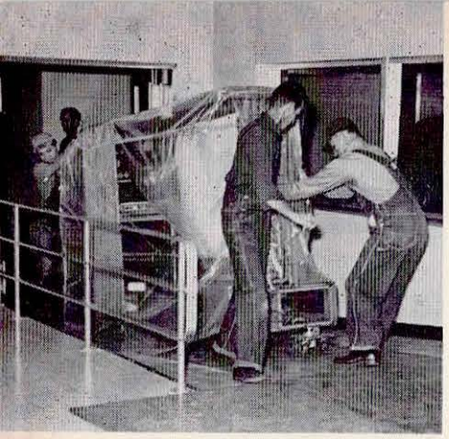
YOUNGSTOWN STEEL CAR CORP.

NILES, OHIO

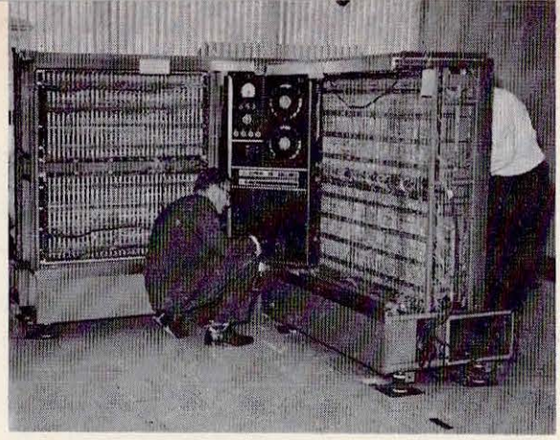


OVER 600 HI-STRENGTH STEEL ANCHORING PINS
located in the average size car in continuous, permanent strips for easier loading and greater protection; built to last car's life; number of anchoring points varies to fit car size.

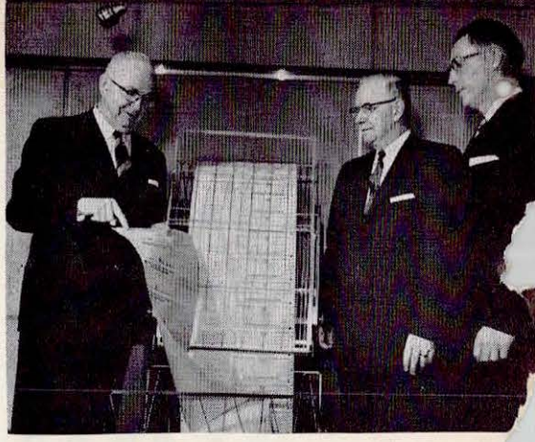
EASY ANCHORING AT ANY POINT; NO LOOSE PARTS
or costly gadgets to ship; car is always in service; eliminates impractical maintenance problems; reduces repair to wooden linings; permits easy relining of old cars with wood or all-steel walls.



Delivery . . .



Installation . . .



Production

UP Has Big Plans for IBM 705

A few days ago, Union Pacific's new giant electronic computer paid off on years of planning. It turned out the first paycheck in the integrated, automated, system-wide program of timekeeping which is one of its initial jobs.

Laid out for the IBM 705 are still other jobs—freight revenue accounting, agency accounting for major stations, material and stock control and stores accounting. And there's production time on the computer for still more.

A computer like UP's is expensive to have around. It rents for some $45,000 a month. Moreover, UP had to build a million-dollar addition to the Omaha office to keep it in. The 705 is being slipped into gear as a logical addition to, rather than a major revision of, established accounting procedures. It will provide new data for management. Information that management now gets from smaller computers will come faster and cheaper.

The Union Pacific's IBM 705 computer provides the hardware for a major concentration of Union Pacific's accounting functions. Its installation was accomplished without unusual procedural revolution. The key factor has been planning—months and even years in advance. It's the factor upon which UP's whole gradual shift to automation in accounting has been based.

The company's annual report for 1957, the year in which the pending acquisition of 705 was announced, described UP's reasoning. "For three years a special team of experts has been intensively studying electronic data processing in the field of paper work. It has been the company's view that it would be uneconomic to incur the substantial expense involved in using a large data-processing machine before a sufficient number of work applications had been developed to keep the machine as fully occupied as possible. This has now been accomplished. . . ."

The story of this accomplishment goes back, in a sense, to about May of 1955. This was when UP took its first step into the higher forms of electronic data processing, although mechanized accounting and punched cards are familiar to the road.

Freight accounts have been handled in part by punch-card machines since 1909. As both equipment and experience developed, mechanized accounting procedures came to be used in other departments. Machine accounting moved into payroll preparation in 1947. Then, in 1955, two events set the road on the path which has ended in the EDPM (electronic data processing machine) center at the Omaha general office.

First, UP ordered two IBM 650 magnetic drum data processing machines. As computers go, they were classed as small-scale machines. Second, a committee which had been set up to do the advance planning for the 650's got a new assignment. It had both long- and short-range phases:

- Develop, in the short range, a program of work for the 650's, first of which was to be delivered in about a year;
- Begin a study to determine whether, in the future, Union Pacific could justify the acquisition of a large-scale computer.

Chairman of that first three-man EDPM committee was Arthur O. Mercer. The committee's analysis of long-range accounting needs resulted in UP giving the nod to the 705. The EDPM committee staff then began programming and setting the final pattern for installation of the highly flexible large-scale IBM computer.

Almost from the beginning, Mr. Mercer recalled recently, justification for a large-scale computer could be seen. Last January the committee began planning jobs for the 705.

Among the UP's reasons for moving with deliberation, one stands out: The road wanted to be sure where it was going. "Actually, the job of operating a large-scale computer is about 75 per cent that of defining the problem you're attacking," Mr. Mercer pointed out. "You spend most of your time trying to find out what you want the machine to do. Coding the actual instructions for the computer is a relatively small part of the task."

High on the list of job possibilities for the 705 were the chores already being handled by the 650's. This was principally payroll work.

The first small-scale computer had been delivered to Omaha in May 1956. It had taken over all timekeeping operations then being handled by machine, as well as some being done manually. By February 1957, the one machine had assumed all timekeeping chores on the road's 3,900-mile eastern district. At that time the second 650 was installed. By June 1957, timekeeping operations for the south-cen-

tral and northwestern districts were moved to Omaha. The mechanical timekeeping bureau at Salt Lake City was closed.

The two 650's were doing other jobs, too. Among them was a system of daily reports to the dining car and hotel department on its inventory and stock control. Within a year, as procedures were tightened up and better reports made possible, the department's inventory was cut 25 per cent.

The 705 has considerably more capacity and flexibility than the 650's.

UP, therefore, came up with this list of jobs for its big computer:

- The entire system timekeeping operation from time slip to paycheck.
- Freight revenue accounting, plus agency accounting for certain of the major freight agencies around the system.
- Material and supply stock control and accounting for the 150,000 items in the railroad's 23 stores.

These three programs will consume about one shift of the 705's total production time. There'll be plenty of room for additional programs as well as maintenance.

What will the 705 actually produce? Take the material and supply program for an example.

Each week, the 705 will give the general storekeeper a report on the status of inventory and distribution for the myriad items UP must keep on hand. The report will indicate clearly just where something is amiss—where material is out of balance, or which items are in short supply.

Union Pacific regards this sort of reporting as managerial control information at its best. Education in the true meaning and value of modern paperwork procedures has been an integral part of the road's shift to machine accounting.

In the supply program, for example, representatives of the EDPM committee sat down with stores department officers to discuss this key problem: what should the ultimate reports say? What is expected from the flow of paperwork which goes along with material distribution and use? Essentially, the answer was this: The report showed where something needs to be done to insure even distribution and adequate inventory.

Participants in the discussion then laid out a general procedure by which this goal could be reached using the 705. The program was kept general to allow for revision if experiment showed it to be necessary. Then the testing began, at two places: on UP's own 650's, and on a 705 kept available for just this purpose at IBM's Poughkeepsie, N.Y., headquarters.

Meantime, UP was negotiating an agreement with the Brotherhood of Railway Clerks to cover the effect of the EDPM center on employment. Agreement was reached October 1. Essentially the contract provides for a four-year period during which the number of employees will be reduced.

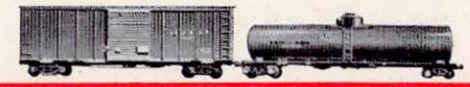
In the future, UP's advancement into not-yet-explored fields of data processing probably will follow the careful pattern of the past. Yet the road's officers feel the goal will be worth the deliberate journey. They can foresee the production of information heretofore considered uneconomical to compile. They'll get required data faster and more accurately. And, despite the whopping rental of the 705 and the cost of the highly specialized EDP center, they'll get it cheaper than ever before.

The Personnel Side of EDPM

Last September 26, Union Pacific signed an agreement with the clerks' brotherhood covering the EDPM center. It became effective October 1. Railway Age obtained a copy of the agreement. Essentially, it . . .

- Establishes key positions anticipated at the center, with their classes, rates of pay and types of work; declares UP's intent to fill vacancies wherever possible from local seniority rosters; sets seniority dates and provides for building a seniority roster for the EDPM center.
- Provides for advance notice of 90 days of any change in work arising from conversion to EDPM methods which will result in work being transferred to Omaha or between Omaha seniority districts; provides that 30 days before proposed effective date UP will give union description of work to be transferred, positions to be abolished and established, adjustments in rates and duties of remaining positions.
- Establishes certain provisions governing transfer of work: assignments to be on basis of seniority, fitness and ability; training to be given accepted senior applicants during regular hours at rate of pay then in effect; employees to be qualified and familiar with basic principles of operation before operating EDPM machines alone.
- Provides that abolition of positions shall be accomplished through normal attrition, except where employee chooses to resign. Normal attrition is to be effective for up to four years from the date each such change in position takes place. UP can use employees retained under attrition on jobs within the class to which assigned, and on other jobs within his usual place of work which would not affect or disturb other regularly assigned positions. If such an employee is absent, carrier may blank the position.
- Gives employee who is displaced to a lower-rated position his going rate of pay, provided he displaces to the highest-rated position available for which he is qualified. Protects employees in this manner for four years.
- Establishes separation allowances for displaced employees who choose to resign. Allowances range from 5 days' pay for each month of service if total is under one year, to 12 months' pay if service is five years or over.
- Provides that UP will pay moving expenses, plus personal expenses connected with moving, for employees required to transfer to Omaha from cities other than Council Bluffs. Carrier will designate how and by whom move will be made. Employee will be given up to 10 days off with pay to find new housing.
- Provides that UP will reimburse employee for any loss incurred in selling his home at less than fair value, from termination of contract or lease.
- Provides that agreement shall not apply to male employees over 65, female employees over 60. Benefits shall cease when these ages are reached. Excludes from agreement employees whose work is affected by decrease in volume, change in requirements or other legitimate cause not directly connected with accounting modernization.

Vol. 1



Railway Executive News

Published by SERVO CORPORATION OF AMERICA, Railroad Products Division

Copyright 1958 Servo Corporation of America
20-32 Jericho Turnpike, New Hyde Park, N.Y.

SELECTIVE SERVICING CUTS SET-OUTS 92%, ONE ROAD REPORTS

A study of hot box set-outs on a single 330 mile daily run, evidenced the value of SERVOSAFE selective servicing. Before the Servosafe System was installed there were 25 set-outs in six months' time. With the Servosafe System in operation, only two set-outs were necessary in the following six months.

The train selected for this study runs 330 miles non-stop after only a limited stop at one station. Thorough journal inspection using conventional methods was uneconomical in the available time.

With the Servosafe Hot Box Detective, all trains coming into this check point receive automatic journal inspection. Journals showing abnormalities are precisely located and service work is concentrated on these bearings. By wasting no time looking over the entire train for the danger areas, every minute of the brief stop is spent correcting pre-located troubles. ■

New York Central Goes System-Wide With Servosafe® Hot Box Detective*

By extending its SERVOSAFE® Infrared Detective System to a system-wide basis, the New York Central has become the world's largest user of hot box detectors.

Recognizing the hot box as the biggest single factor behind freight train derailments, the Central is increasing its use of SERVOSAFE Detectives to cover its entire 10,700 mile, 11 state system.

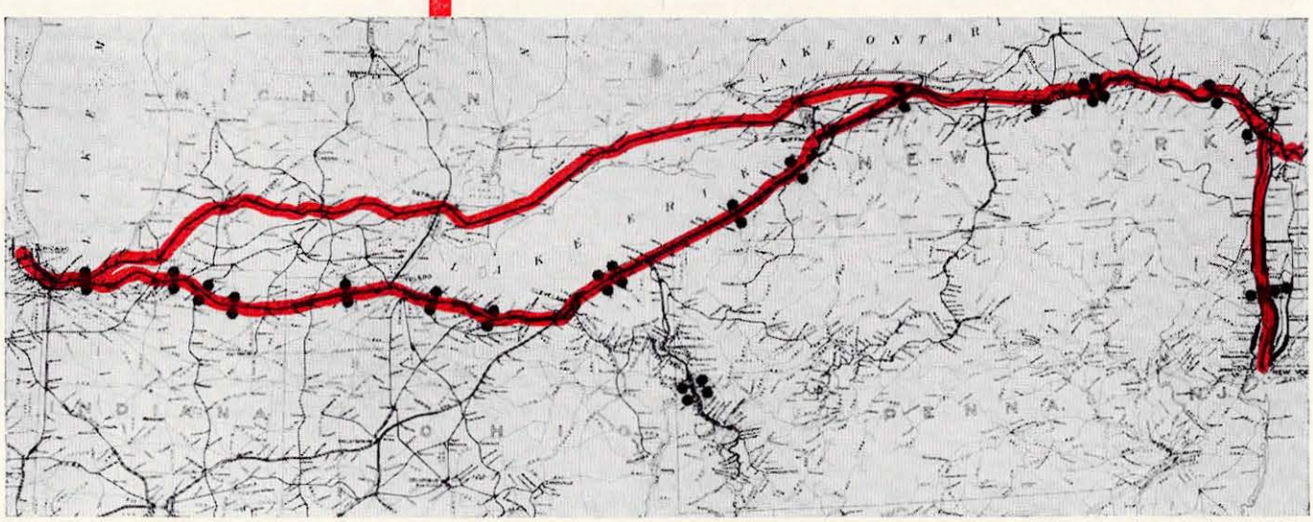
As shown by the map below, 17 units at nine locations are now in operation—with 15 more units at 12 new locations being installed by December. Early in 1959, the road plans to install 20 more units.

Located at terminals and interchanges, at interim inspection points and along the right of way at strategic spots, these SERVOSAFE Hot Box Detectives locate overheated journals automatically, instantly and accurately. By giving early warning, they reduce repair costs. By pinpointing incipient hot boxes, they minimize inspection time and make possible selective servicing. Fewer set-outs and reduced car shopping are results which have been proven on ten major railroads using the SERVOSAFE System.

In addition to direct savings, shipping schedules are better maintained, and equipment, CTC, interlockings, structure and "consist" are protected against damage caused by hot boxes. ■

New York Central's first Hot Box Detective installation was made early in 1957 at Huron, Ohio. Its performance led to units being placed near Wauseon, Ohio; Dock Junction, Pennsylvania; Brimfield, Indiana; and Syracuse, Canastota, Oneida, Chili Junction and Angola, all in New York State.

The Hot Box Detectives now being delivered will be located at Germantown, Garrison, Savannah and Ripley, New York; Amherst, Crestline, Galion and Russia, Ohio; New Carlisle, Ingalls and Millers, Indiana; and Ann Arbor, Michigan.



*U.S. & Foreign Patents Applied For

Current Railroad Questions

Our question on staggering rail joints at midpoints of rails was first raised in our December 1 column (p. 32). Below is another man's response to the question. There will be more on this subject when the column resumes after the holidays.

The second question this week, concerning measurement of operating performance, was suggested by a man who feels there is real need for an adequate method of measuring and comparing the speed of average carload shipments from shipper to consignee. Figures on average freight train speed and on the performance of hotshot freights, our correspondent felt, tend to give an inaccurate picture of individual performance as it is seen by the shipper. We'll have more on this later, too. . . . *G.C.R.*

Why Are Rail Joints Staggered at Midpoints of Rails?

"It has been the experience of railway maintenance engineers in America, over a long period of time, that staggering rail joints produces a much smoother riding track. This, of course, adds to the comfort of our passengers, and reduces wear to rolling stock and the track structure. If rail joints are laid opposite each other, and I especially refer to conventional rail lengths of 39 feet, there is a tendency for the track to have an undulating effect. This is quite noticeable if the joints, as well as track structure, are not properly maintained. One of the weakest links in a track structure is at the rail joint. This is the point which concerns maintenance personnel more than any other, with the possible exception of switches, turnouts and rigid crossings. The impact of rolling stock on the ends of rails causes more subsidence of ballast than at other points, which tends to magnify the undulating effect to rolling stock. When joints are staggered, the effect is more or less eliminated and is often replaced with a kind of sidewise or swaying motion to equipment.

"We on the Atlantic Coast Line have followed for some time now the following recommendations as outlined in the American Railway Engineering Association's Manual:

" 'Rails shall be unloaded opposite the locations on which they are to be placed in the track, with suitable gaps being allowed for short lengths. Rails shall be so placed that the joints in each line of rail shall be not more than 30 in. from the centers of the opposite rails and preferably not more than 18 in. Locations of joints can best be determined with a steel tape.' (Pg. 5-5-1, in volume I of the Manual, under Track Maintenance).

"In conclusion, it is our considered opinion that the best riding qualities of track can be obtained by staggering the rail joints."—*L. S. Jeffords, vice president operating department, Atlantic Coast Line.*

Do We Measure Operating Performance Adequately?

"While I agree with your correspondent, who posed the question, that the performance of scheduled freight trains may be misleading when applied to individual cars, this record is, of course, important to railroad operating officers.

"I do not see any particular significance in maintaining a record of average carload speed. Our patrons seem to be quite capable of advising us promptly when we fail to render satisfactory service on the movement of their freight.

"In connection with regular or recurring movements, we know, for example, that we will receive a regular delivery from road 'A' to move on one of our designated symbol freight trains. At point of origin, our yard forces are on the lookout for these deliveries and frequently call connecting lines if the delivery has not shown up. Intermediate yards are policed on keeping such traffic moving through in connections.

"We have worked diligently with our connections at many points to coordinate, to the maximum extent, our deliveries to them for movement in certain of their symbol trains; also to set up receipts from connections for forwarding in our symbol trains.

"Our various traffic offices make spot checks on traffic moving into their territories and advise us promptly if we are failing to provide schedule service. There are cases of individual cars mishandled in terminals and failing to move through in connections, but any pattern or regularity of such failures is quickly apparent, enabling us to take necessary corrective steps.

"Certain commodities formerly considered as tonnage freight are now oft-times traced more diligently than was the case a few years ago with the so-called time freight. I have in mind commodities such as sand, rock and gravel and, in some cases, coal, where the consumer does not maintain a stock pile and expects to use the material directly from the rail car.

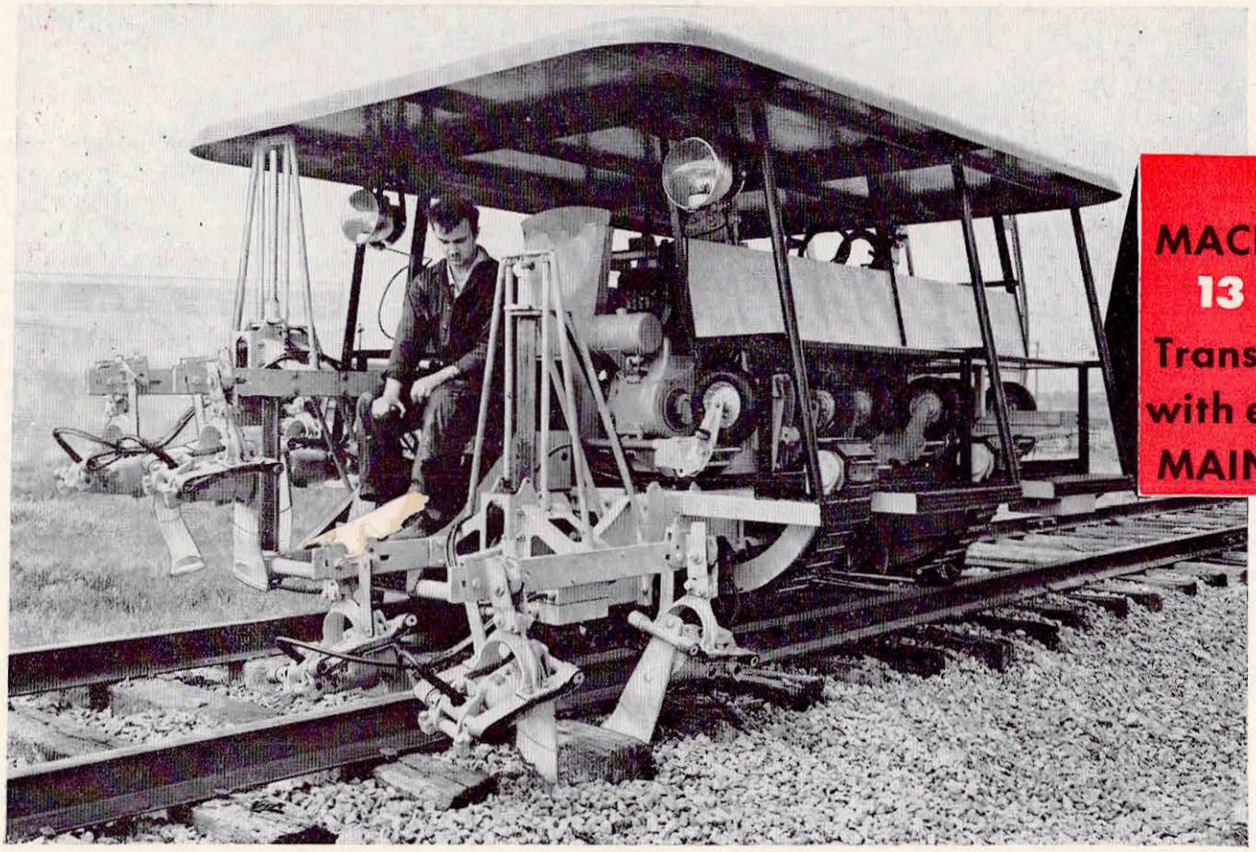
"We require what we term a 53 Report covering cars set out, whether bad order or for other reasons. These reports are transmitted to the transportation office by telegram or Teletype, and inspection of same gives leads to enable prompt corrective action."—*E. E. Foulks, assistant vice president, Chicago, Rock Island & Pacific.*

CONDUCTED by G. C. RANDALL, district manager, Car Service Division (ret.), Association of American Railroads, this column runs in frequent weekly issues of this paper and is devoted to authoritative answers to questions of interest to railroaders at all levels of responsibility. Readers are invited to submit questions and, when so inclined, letters agreeing or disagreeing with our answers. We will pay $10 for questions suggested by readers, which are used in this column. Communications should be addressed to Question and Answer Editor, Railway Age, 30 Church Street, New York 7.

NEW CONCEPT IN TRACK

Tamper MULTI-GANG* PACKAGE UNIT

Greatly Lowers Maintenance Costs



3 MACHINES, 13 MEN Transported with ease on MAIN CAR.

A COMPLETE UNIT—all three machines (or other equipment) are housed in Main Car.

RAPIDLY REMOVED FROM TRACK by Crawler Set-Off . . . in a matter of seconds.

POWER DOWNFEED OF INDEPENDENT WORKHEADS . . . operates easily.

HYDRAULIC PROPULSION . . . the Main Car travels up to 25 MPH.

THESE HYDRAULIC MACHINES are *easily* loaded on or unloaded from Main Car, by hydraulic Tail Rack.

LOOK WHAT THE MULTI-GANG WILL DO:

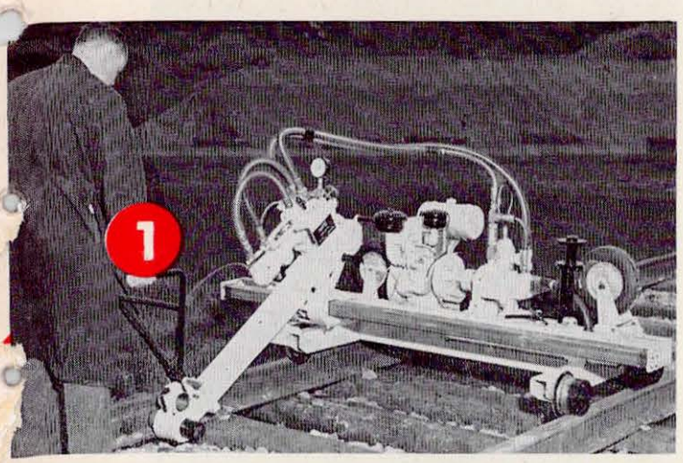
surface • line track • pull spikes without bending • remove or insert ties • torque controlled bolting • drills rail
MULTI-GANG'S Main Car is 171″ long x 113″ wide x 84″ high.

TAMPER MULTI-GANG PACKAGE UNIT

consists of:
Main Car with Power Downfeed Tampers and Crawler Set-Off
Hydrillbolter
Spike Hydrejector—Tie Hydrenewer
Comboliner

MULTI-GANG UNIT EXTENDS THE TRACK SECTION

SECTION MAINTENANCE



HYDRILLBOLTER* (*Model* BD)

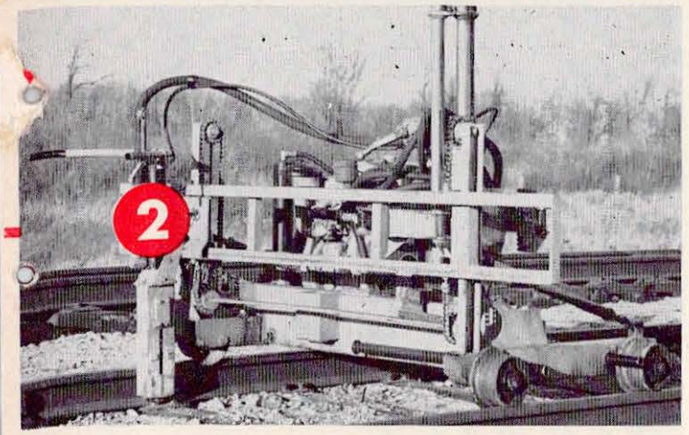
Combination Bolter and Rail Drill

Hydraulic Transmission
Minimum Mechanical Replacement Parts

BOLTER
- single control lever, manned by one operator
- automatic change from high speed, low torque, for 'running up' nuts to low speed, high torque for nut tightening
- handles nuts on either side of both rails

DRILL
- drill attachment adapted in less than 2 min.
- manned by one operator
- easily adjusted for different rail sizes
- drill bits quickly interchanged

HYDRILLBOLTER can be removed from track by two men.



SPIKE HYDREJECTOR*

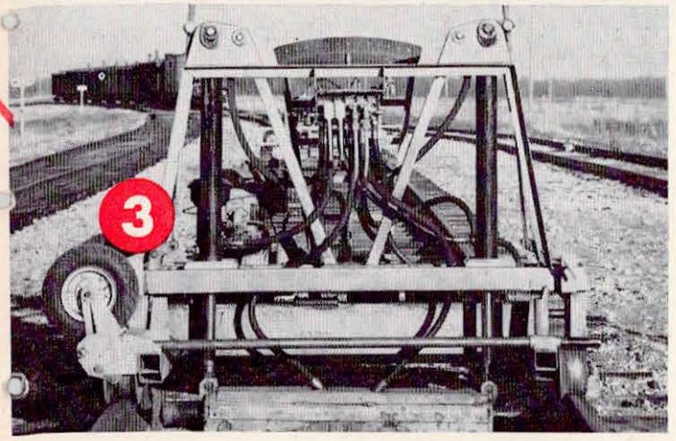
TIE HYDRENEWER* (*Model* PR)

Combination Spike Puller and Tie Renewer

pulls spikes without bending • lightweight • completely hydraulic • easily operated by one man.

Tie Renewer is adapted to Spike Puller in seconds
No disturbance of track line or surface
Renews without digging out tie ends

Removed from track by one man.



COMBOLINER* (*Model* JL)

Combination Powered Jack and Track Liner

powerful • lightweight • compact

- 10,000 lbs. thrust to throw the track in either direction
- simply insert lining anchors and slide out wheels to line the track
- lifts track to 10 inches, rail dogs engage automatically
- turntable allows easy pivoting
- cross level indicator reads directly in inches of elevation
- no wheels, axles to interrupt view of rails

Easy to remove from track.

***ORGANIZE . . . MECHANIZE . . . ECONOMIZE* with MULTI-GANG**

For full information, contact

Tamper LIMITED
RAILWAY DIVISION

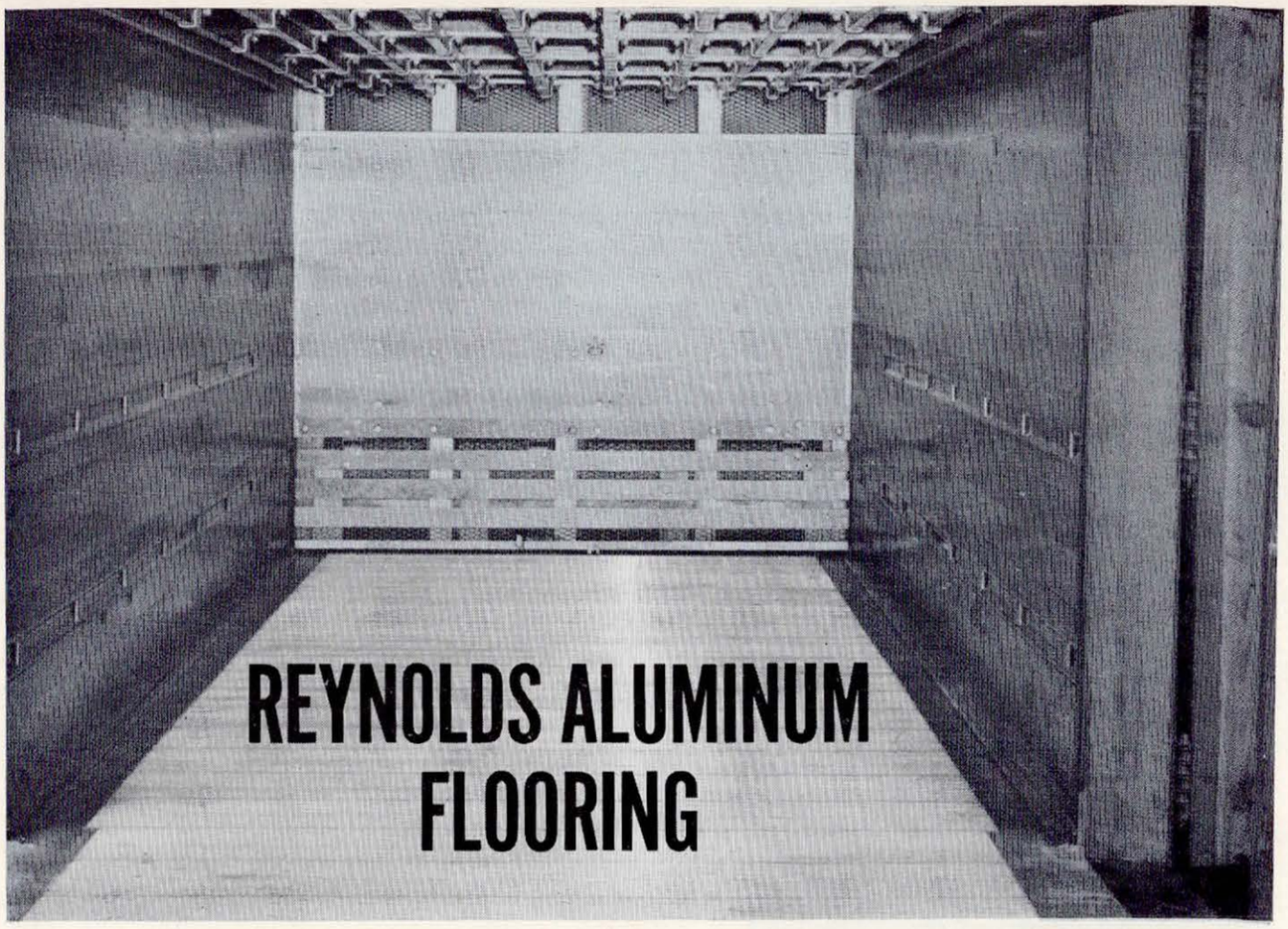
Head Office and Plant:
160 ST. JOSEPH STREET, LACHINE, MONTREAL 32, CANADA

25 Faukland Avenue
Scarborough, Ontario

2281 Portage Avenue
St. James
Winnipeg, Manitoba

P. O. Box 459
Vancouver, B.C.

* *Patents Pending*



— lasts the life of the car!

Reynolds Aluminum flooring can add new life to an old refrigerator car, replacing worn-out wood flooring . . . and it can reduce maintenance, eliminate floor replacement and add years of service on a new car.

The ordinary wood flooring in a refrigerator car will have to be replaced . . . but not Reynolds tough aluminum flooring—it can be expected to *last the life of the car*.

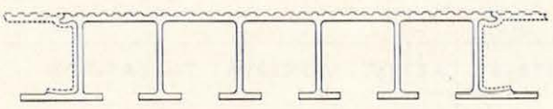
Equally important, the aluminum flooring is easy to clean. It won't retain odor or soak up moisture; prevents leakage and costly damage to insulation; can't rust, rot or splinter. It can be kept "hospital clean" for sanitary food handling and shipping.

Designed in 10-inch interlocking extruded panels, Reynolds Aluminum flooring can be installed quickly with a water-tight fit, and it provides non-slip footing for greater safety. It's lightweight, so a minimum of labor is needed for installation.

Strong, lightweight, rustfree Reynolds Aluminum serves the railroad industry and shippers by reducing deadweight, cutting maintenance and lengthening service in many other uses, too: crossmembers, baggage car and box car doors, floor racks, roofs, crossbucks, interliners, bulkheads and operating signs.

For details, contact your local Reynolds office or write *Reynolds Metals Company, P.O. Box 2346-TM, Richmond 18, Virginia.*

Watch Reynolds new TV shows—**"WALT DISNEY PRESENTS"** and **"ALL-STAR GOLF"**—every week on **ABC-TV.**

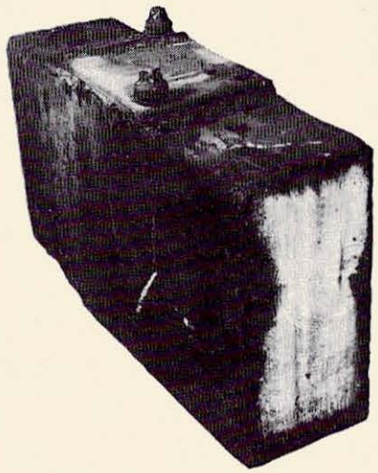


Reynolds Aluminum Flooring Sections interlock for water-tight fit, quicker installation, strength.

The Finest Products Made with Aluminum are made with REYNOLDS ALUMINUM

PROOF THAT BIRD SELF-SEALING TIE PADS

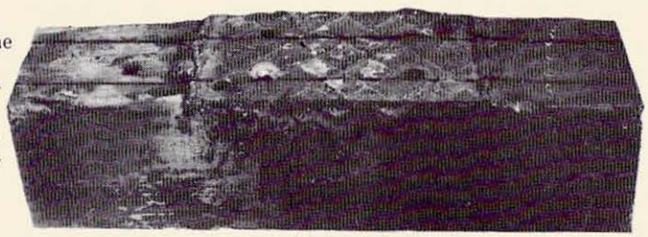
Extend bridge tie life by at least ten years



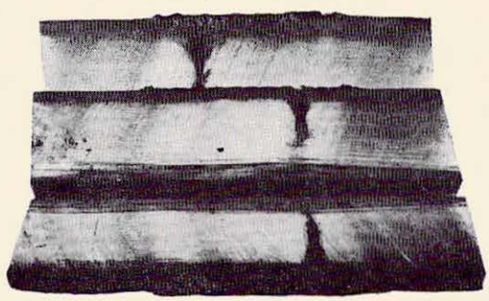
After 10 Years' Protection: This 8" x 16" bridge tie has been protected for 10 years by Bird Self-Sealing Tie Pads. Pad is still securely sealed to the tie to prevent even the slightest penetration of moisture or abrasive materials. The beading at the edges of the pad is characteristic of Bird Tie Pad performance.

These unretouched photographs of a bridge tie dramatically illustrate the underplate protection afforded by Bird Self-Sealing Tie Pads. Life of the *preceding* deck on this bridge at Akron, Ohio, was 19 years. When the deck was replaced in 1948, Bird Self-Sealing Tie Pads were installed. The sound condition of the ties today, after 10 years, indicates *at least* a 50% increase in their life expectancy beyond that previously obtained without the protection of Bird Self-Sealing Tie Pads. Write for interesting booklet to Bird Tie Pads, East Walpole, Massachusetts, Department HRA-9.

Pattern Bottom Plate: This is the same tie, halved and slabbed. Note imprint of pattern bottom tie plate on the pad. *Bird Self-Sealing Tie Pads give the same rugged, lasting service when used with either pattern-bottom or smooth-bottom tie plates.*



Under-Plate Protection: Slabbed sections of the halved tie show the excellent condition of under-plate and spike hole wood after 10 years' protection by Bird Self-Sealing Tie Pads.



PHOTOS COURTESY OF ERIE RAILROAD

Bird Self-Sealing Tie Pads are Recommended for:

BRIDGE DECKS • CURVES • SWITCH TIMBERS • HIGHWAY GRADE CROSSINGS AND OTHER PAVED AREAS • CROSSING FROGS • INSULATED JOINTS • WITH SMALLER TIE PLATES • PILE CUTOFFS • THROUGH STATION PLATFORMS • OUT-OF-FACE INSTALLATIONS IN RAIL LAYING PROGRAMS • SANDY LOCATIONS • ALL OTHER LOCATIONS WHERE TIE LIFE IS SHORT OR REPLACEMENT COSTS HIGH.

Best... BIRD & SON, inc. Established 1795 *Buy BIRD*

Do Experiments Attract Passengers?

Not everyone believes an epitaph is needed for railroad passenger business. Here's one important reason why:

The past year has probably seen more innovations designed to attract railroad passengers than any comparable period since the advent of the streamliner.

Among the experiments have been low-cost meals; a single fare for coach or Pullman travel; two roomettes for the price of a double bedroom; economical party fares; family fare plans, applicable every day or selected days; and new equipment like Slumbercoach.

Budd's Slumbercoach has met with nothing but success on the Burlington and B&O. North Western indicates that, if it buys long-haul passenger equipment again, the design will be bi-level as in the new Pullman-Standard trains. And the Pullman-Standard car remanufacturing program has stirred up interest which may well produce orders beyond the 50 cars sold, upgraded and leased back by C&NW.

This second Railway Age article on the railroads and their passengers will explore some of the innovations: What they are—and how they're doing.

One-fare plans—in assorted sizes and styles—have caught the eye of at least eight railroads. There's little uniformity among the various schemes (six separate types of one-fare operations are in use). But those plans in effect longest seem to be working well. Missouri Pacific and Kansas City Southern have the evidence. So do Burlington and B&O with Slumbercoach—which, stretching a point slightly, is a one-fare plan.

These are the variations of the theme now being played:

- Burlington—Slumbercoaches on the "Denver Zephyr" offer a private room for coach fare, plus $7.95 occupancy charge.
- Missouri Pacific—Most publicized feature has been the "Colorado Eagle" Thrift-T-Sleeper, which provides Pullman accommodations for coach fare plus reduced space charges. But MoPac also has had success with two other one-fare plans: (1) For Houston-Brownsville service, one-way coach fare covers one-way coach or Pullman travel, one-way first class fare covers roundtrip coach or Pullman travel. Pullman occupancy charges also have been reduced; (2) For Houston-New Orleans and Little Rock-New Orleans service, coach tickets are honored in sleeping cars with payment of the regular space charge.
- Texas & Pacific—Coach tickets and the regular space charge are good for occupancy of conventional cars only on the "Westerner" and the "Louisiana Eagle."
- Kansas City Southern-Louisiana & Arkansas—Coach tickets are honored in all KCS-L&S cars on all trains, with space charge additional.
- Milwaukee—The intermediate rail fare structure for Touralux sleeping cars on the "Olympian Hiawatha" has been dropped. Coach tickets are good in Touralux cars, with space charge additional.
- Great Northern—Sleeping cars on the "Western Star" (Twin Cities to Seattle-Portland) have been opened to passengers with coach tickets and the price of the space.
- Northern Pacific—"Mainstreeter" sleeping cars may be occupied on coach tickets plus space charge, applicable between St. Paul-Minneapolis and West Coast points.
- Baltimore & Ohio—Slumbercoach occupancy on the "Columbian" is available for coach fare plus $6.

Aside from Slumbercoach, all other one-fare plans have been flagged as experiments carrying a six-month time limit. But KCS, one-fare longer than most, is ready to extend its program beyond the original Dec. 31 expiration. MoPac launched Thrift-T-Sleeper as an experiment, added up the results and announced that the cars will remain in service indefinitely.

As yet, there's little justification for predicting a sweeping revision of the traditional passenger fare structure. Even if the need for revision were unanimously accepted, differences of opinion would arise over the specific method. Some roads have continued in the time-honored two-fare manner. Others have gone, wholly or partially, to one-fare. Still others concede a need for fare revision, but prefer something in between present coach and first-class fares.

Connections can also pose a problem—although apparently not an impossible one in view of agreements made by MP and T&P with GM&O, Rio Grande and KCS-L&A for sleeping car fare adjustments on through cars.

And finally, there's a certain element of confusion involved in the current vogue for experimentation, with every road offering something different. One passenger traffic officer put it this way:

"I sure wish there was one system we could all agree on."

What Do They Prove?

What have these varied attempts proved? For the three northern lines and T&P, not too much yet. The newness hasn't worn off. But for the others:

- Take MoPac's comments on Thrift-T-Sleeper: "This service has proved to be extremely popular . . . has exceeded 100 per cent occupancy practically every day since its inauguration. Each month . . . the Pullman revenue earned exceeded the latest average Pullman operating cost for that type of sleeper." On the Houston-Brownsville reduced rail and Pullman fare: "Figures, compared with last year, indicate (notwithstanding an approximate 45 per cent reduction in rail and Pullman charges) that the number of Pullman tickets sold increased 59.6 per cent, Pullman revenue 20.84 per cent and local rail revenue 25.2 per cent." That 25.2 per cent increase in rail revenue covered June 1958, compared with June of last year. July revenues were up 72 per cent. August posted the best yet —99.9 per cent above August '57. Houston-Brownsville (like MP's other fare experiments) has been extended another six

GN's "WESTERN STAR" Pullman space may now be occupied for the price of the space plus coach fare.

months. On Houston-New Orleans fare cuts: "Occupancy of the Pullman has ranged from 62 to 71, 86 and 90 per cent, progressively."

● Or take the B&O-Burlington experience with Slumbercoach: B&O's cars, placed in service last March 2, averaged only 51 per cent occupancy for the first month—due, B&O believes, to limited advance publicity resulting from a close margin on delivery. Slumbercoach hasn't taken a backward step since then. Figures on percentage of occupancy: April, 80 per cent; May, 84; June, 94.5; July, 96; and August, 97.4. Burlington is enjoying the same experience—"Occupancy rate for the 1958 summer months was greater than in the comparable months of 1957."

Both roads have taken surveys of passengers. B&O found that 23.8 per cent of its Slumbercoach passengers would have traveled by air had the low-cost rail service not been available. Burlington found its patrons were (1) new business, drawn from competing transport; and (2) persons who would otherwise have traveled by coach.

● Finally, look at KCS-L&A, which went to one-fare on all trains. Summer travel was up (from '57 levels) by 5 per cent in coaches, 40 per cent in sleeping cars. KCS attributes the jump in Pullman patronage "almost exclusively" to the one-fare system. Moreover, KCS earnings per passenger train mile are higher than at any time since the war years and up 30 cents from 1957.

Once past one-fare, the list of travel-boosting incentives spreads out to cover a host of sometimes-imaginative, sometimes just logical, innovations.

Dining car prices have long been a source of passenger complaints. But even at those prices, nobody makes money on the diner. A variety of cost-cutting methods are being tried—C&O's package of rail fare and meal coupons; MoPac's Travel-Tray meals served to coach passengers at their seats; Wabash's Silver Dollar dinner, featured in the dining car; Union Pacific's free buffet on the "City of Las Vegas"; lower food prices on Great Northern's "Western Star," among others.

No Retreat Anywhere

Here again, nobody has backed down on the offer. C&O started low-cost dining on its Michigan trains, later extended a similar plan to central and eastern lines. MoPac has steadily expanded the scope of Travel-Tray; UP continued the free-food innovation long after the GM Aerotrain was supplanted by standard equipment on the Los Angeles-Las Vegas run

Just one example of how it's worked: Missouri Pacific's Travel-Tray promotion has sold an increasing number of meals each month since December 1957. Meals served as of Nov. 1 total well over 77,000. And Travel-Tray has been more than just an artistic success. Where MP has been able to provide the service with the bus waiter from the diner, the operation has been profitable. Where the number of meals has required use of a second waiter, "we just about break even on the expense. But we feel the goodwill in public relations created by our efforts justifies our performing this service on a basis that merely meets out-of-pocket expenses."

More Innovations

Among the other experiments:

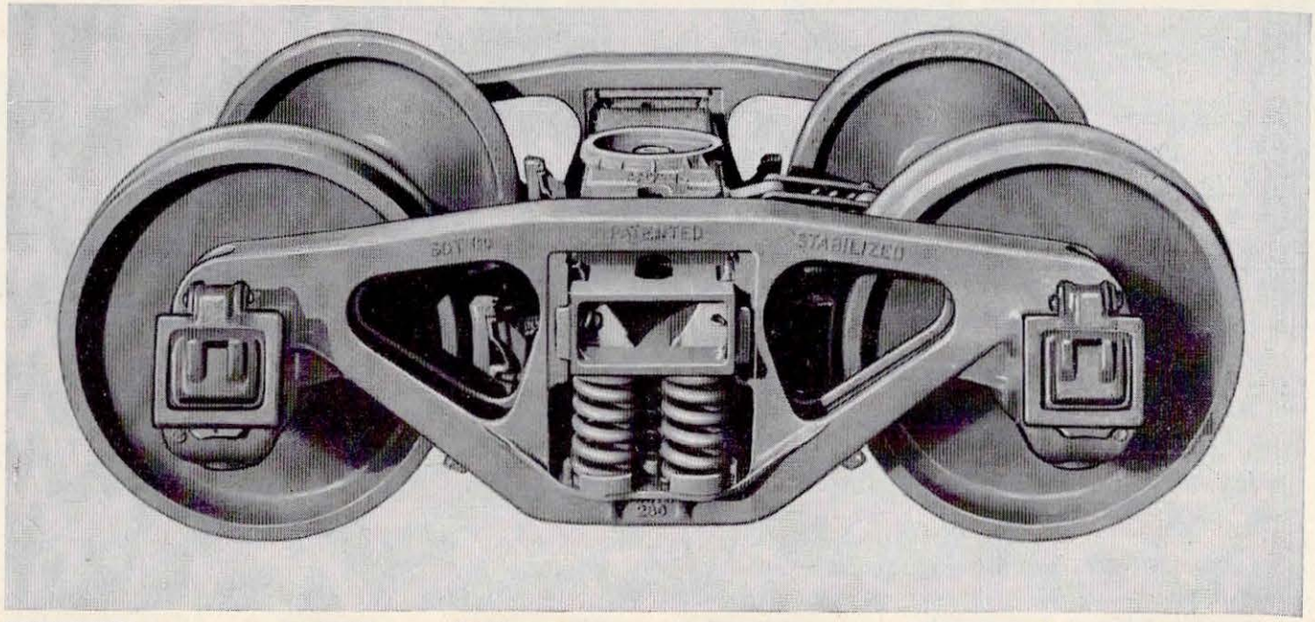
● MoPac, T&P and KCS-L&A are proposing to make the price of a double bedroom good for occupancy of two roomettes between all points. In addition, GM&O and Rio Grande are participating in the same proposal as applied to certain through-car routes.

● MoPac is offering a 10-ride bearer coach ticket at the price of four round-trips between St. Louis-Jefferson City and Kansas City-Jefferson City. There's no rail competition on the route. MP's aim is to draw passengers from the vast horde who now prefer private auto transportation.

Viewed individually or collectively, these programs aren't in themselves going

(*Continued on page 26*)

World's Easiest Truck Servicing BEGINS WITH

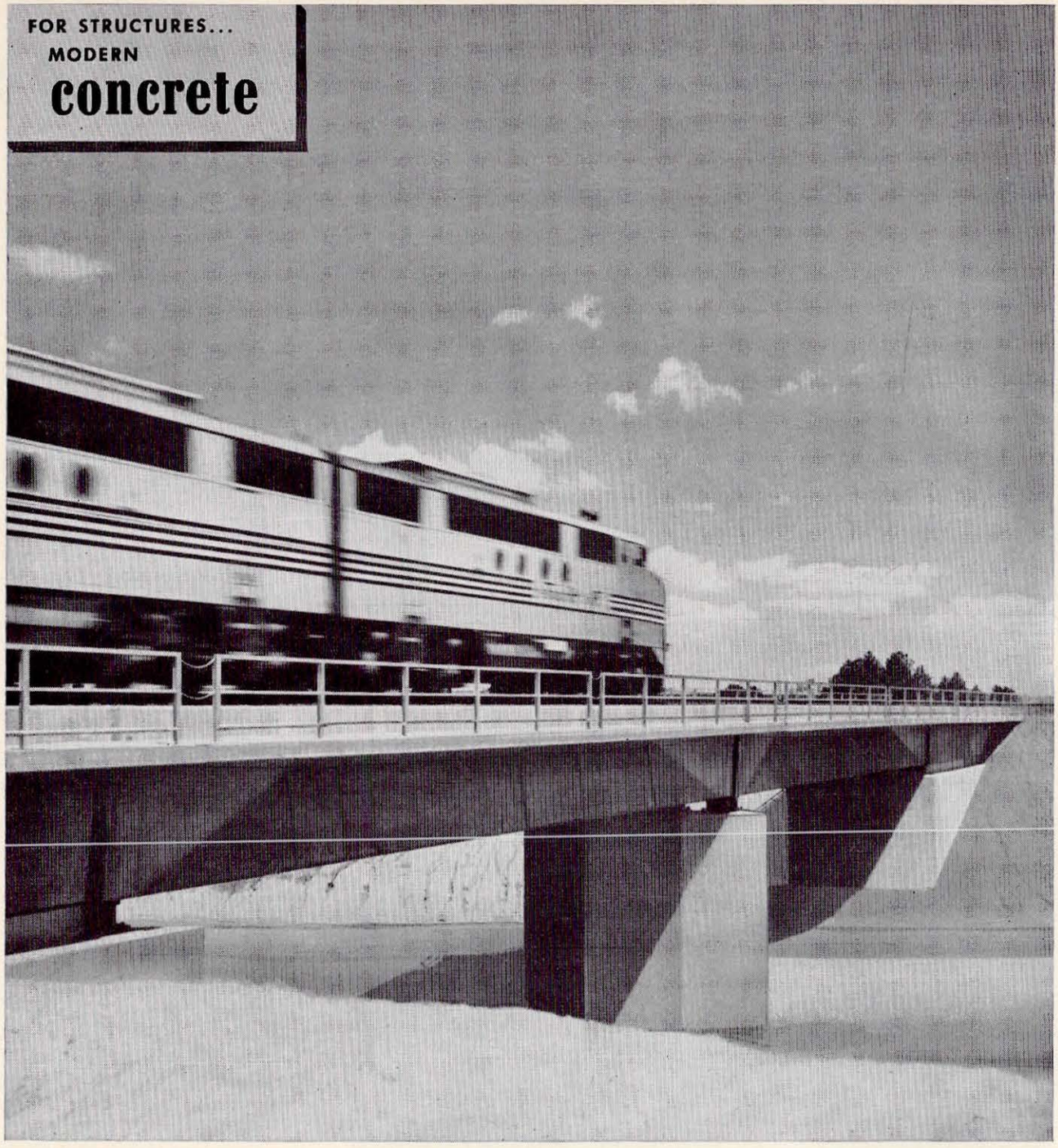


BARBER STABILIZED TRUCKS

Less service time and costs add up to important savings. So, experienced freight car designers naturally "Begin With Barber Stabilized Trucks." Because: When necessary to service Barber parts, friction castings, wear plate and side springs are removed and replaced *5 to 10 times faster* than those of other trucks . . . can be inspected at a quick glance. Result of the *more than 475,000 Barber car sets sold,* none has ever worn out!

Standard Car Truck Company, 332 South Michigan Avenue, Chicago 4, Illinois. *In Canada:* Consolidated Equipment Company, Ltd., Montreal 2, Quebec.

FOR STRUCTURES...
MODERN
concrete



At the USAF Academy . . .

Santa Fe bridges use prestressed concrete girders to span 70 feet for E-72 loading!

CONCRETE blends beautifully with U.S. Air Force Academy architecture. And Cooper's E-72 loading meets Santa Fe requirements.

Engineers achieved both beauty and strength with prestressed girders and a cast concrete deck. And girders are *three times longer* than ever used before for prestressed railroad bridges.

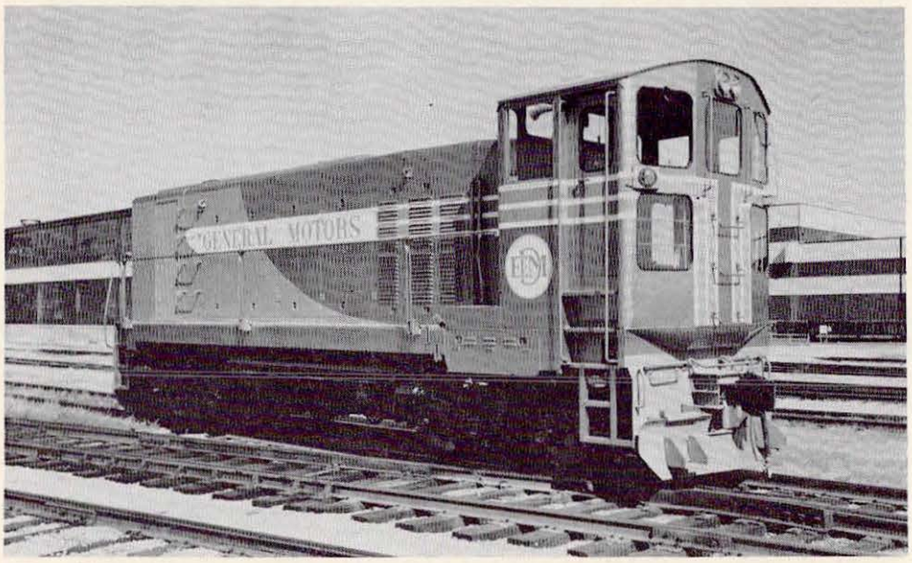
Maintenance costs stay low. No painting needed. Concrete won't rust, rot or burn. No vibration. That's why more and more progressive American railroads are turning to durable concrete to improve service and save money.

PORTLAND CEMENT ASSOCIATION

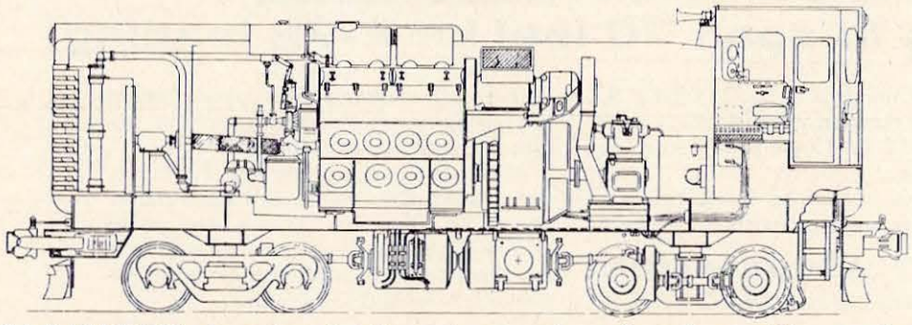
A national organization to improve and extend the uses of concrete

EMD Introduces Two New Diesels

TOP-RATED FREIGHT HAULER, the SD-24 resembles EMD's current SD-9, except for higher roof and bulge which covers turbosupercharger. This unit already has seen test service on Burlington and DM&IR.



PINT-SIZE EXPORT MODEL, the GA-8, is designed to replace steam on foreign roads which can't justify existing export diesels for cost or weight reasons. Its characteristics have interested some U.S. roads as well.



GA-8 DIAGRAM shows how traction motors are hung from frame. They can be serviced without dropping the trucks. Diesel engine is standard 800-hp 567C. EMD thinks cab-forward body design will yield excellent visibility.

General Motors this week is adding a new locomotive model to each end of its line. One is a 2,400-hp supercharged unit built to speed tonnage freight trains. The other is an 800-hp lightweight designed to hit a vast export market considered untouchable by other units because they're too heavy or too expensive.

Testing of the SD-24, new muscle man in EMD's catalog, has demonstrated its ability as a tonnage mover. A turbosupercharged diesel engine—the 567D—makes the difference. EMD's supercharger has an innovation: at low engine speeds, it's driven by the engine's gear train rather than by exhaust gases.

The new GA-8 export model breaks with tradition in several ways to adapt itself to foreign needs. Ifs first cost is low, as are its servicing requirements. Yet utilization can be great. It'll pull freight or passengers or act as a switcher. Its axle loadings are, EMD says, "phenomenally low." In size and weight, it's a shrimp.

With tests on the Burlington and Duluth, Missabe & Iron Range behind it, EMD's new supercharged SD-24 this week is being formally introduced to the railroad fraternity. And along with it comes a baby brother which EMD hopes will become popular overseas: the GA-8 export model.

Souped-Up SD-9

The SD-24 is essentially a souped-up six-motor SD-9 utilizing a turbosupercharged model of EMD's standard 567 diesel engine. It will generate 2,400-hp against the SD-9's 1,750. Its future, EMD thinks, lies in its ability to speed heavy tonnage.

Tests have shown that the SD-24 can take a tonnage train over level ground 16% faster, and boost it up a 1% grade 25% faster, than existing locomotives designed for a wider range of services.

EMD's turbosupercharged 567D engine, prime mover for the SD-24, has been redesigned to handle the heavier horsepower. Design changes have been made in the crankcase, liner-to-crankcase seal, piston and rings, piston pin bearing, connecting rod bearing, cylinder heads and valve assemblies, camshaft, valve gear, injector, oil and water pumps, and exhaust manifolds.

The supercharger itself is unlike most others because of its application to the two-cycle engine. At low engine speeds, when exhaust gases couldn't drive the

compressor turbine fast enough to supply scavenging air, the engine's gear train train takes over. Then, when the engine is speeded up, a clutch permits the compressor to run free when exhaust gas energy will turn it faster than the gear train can. The compressor will supply air pressures up to 15-psi.

The supercharged engine and other components fit into a carbody which is essentially that of the SD-9 except that the roof is 6 in. higher. Total weight of the unballasted locomotive is about 328,000 lb. It can be built to a maximum weight of 390,000 lb.

The GA-8 export model, on the other hand, has been designed for precisely the opposite kind of railroading—where track and bridges are too light to take a heavy locomotive, where extensive shops don't exist, and where mileage is so small that an expensive locomotive can't be justified. EMD thinks a vast market of this character exists in replacing some 50,000 steam locomotives in Asia, Africa and South America. Some U.S. roads also have made preliminary studies of how they could use the GA-8.

By U.S. standards, the GA-8 is something of a radical. It is only 32-ft 6-in long and 12-ft 10 ½-in high. It weighs a mere 52 tons (a domestic 600-hp switcher weighs 100 tons). Its two traction motors hang from the frame, where they can be serviced freely. The motors drive freight-car-type trucks through an automotive-type system of shafts and bevel gears.

Brakes, too, are of a new type: air-operated disc brakes on the drive shaft. Control wiring has been simplified because GA-8's are not normally designed to be operated in multiple.

Basic components of the locomotive are those which EMD long has used in domestic diesels. Therefore, the manufacturer thinks, the GA-8 will be rugged and long-lived in export service. Maximum speed of the locomotive can be as high as 52 mph, sufficient for the types of service expected. And if the GA-8 still won't fit foreign clearances, an available cab modification chops the overall height down to an even 12 ft.

Railroading After Hours with Jim Lyne

STEAM LOCO SOUNDS—O. Winston Link of 58 E. 34th St. in New York has sent me his second LP record of steam locomotive sounds, which he made on the N&W. Mr. Link is a photographer by profession, with an affection for steam locomotives. He picked up these sound recordings incidentally, on numerous picture-taking trips on the N&W. All you have to do is put the record in your music box and shut your eyes, and very little imagination gets you aboard a steam-powered passenger train. With all its obvious merits, the diesel hasn't been able to equal the musical and metrical performance of the iron horse.

OPTIMISTIC PRESIDENT—The youthful president of a large railroad talked to me the other day in terms of great hope and enthusiasm for the railroad industry's future.

His opinion (which I share) is that the relative inherent strength of the railroad industry was never greater than it is now. In a time where economy of fuel and man-power becomes more important day by day, the railroads are the only form of land transportation that conserves both. Railroad difficulties are man-made, wholly artificial. Hence these difficulties are remediable: and great should be the rewards of the fellows who find and apply the remedies.

I hope this young president's enthusiasm will rub off on some of the worry warts. If there were no problems to solve, the railroads would not need the services of able young men. Problems create opportunities—they don't destroy them.

JOB CONTENT CHANGES—As a fellow who has been watching railroad operations for a good many years, I never cease to be amazed at the change that comes in some railroad jobs. Many of them are much easier than they used to be (shorter hours, less hard work). But some of them are as exacting as ever, or even more so (e.g., that of any officer from trainmaster on up).

I've often wondered if the reason some employees want a shorter week isn't the fact that their work isn't as interesting as it could be made to be. If there were more educational opportunities offered to employees in the ranks, that might provide a lot of them with more of what they really want than increased leisure. Not all the brain power that exists on the railroads is hitched up—some of it is being wasted.

SCARING THE YOUNG MEN—An alert young railroader told me the other day that several mature railroad officers, whom he knows I respect, had advised him to get into some business with a more certain future than railroading.

"What other business?", I asked. I got the same kind of advice this young man is getting, before he was born. For myself, I doubt the wisdom of advising young men what they ought to do. It is enough for the oldsters to ask questions and make sure the boys have all the facts—but the boys ought to be left to do the deciding themselves.

"MOONLIGHTERS"—I see this term used a lot—in other industries, not the railroads—for people who hold down two jobs. On the railroads, there's nothing new about this.

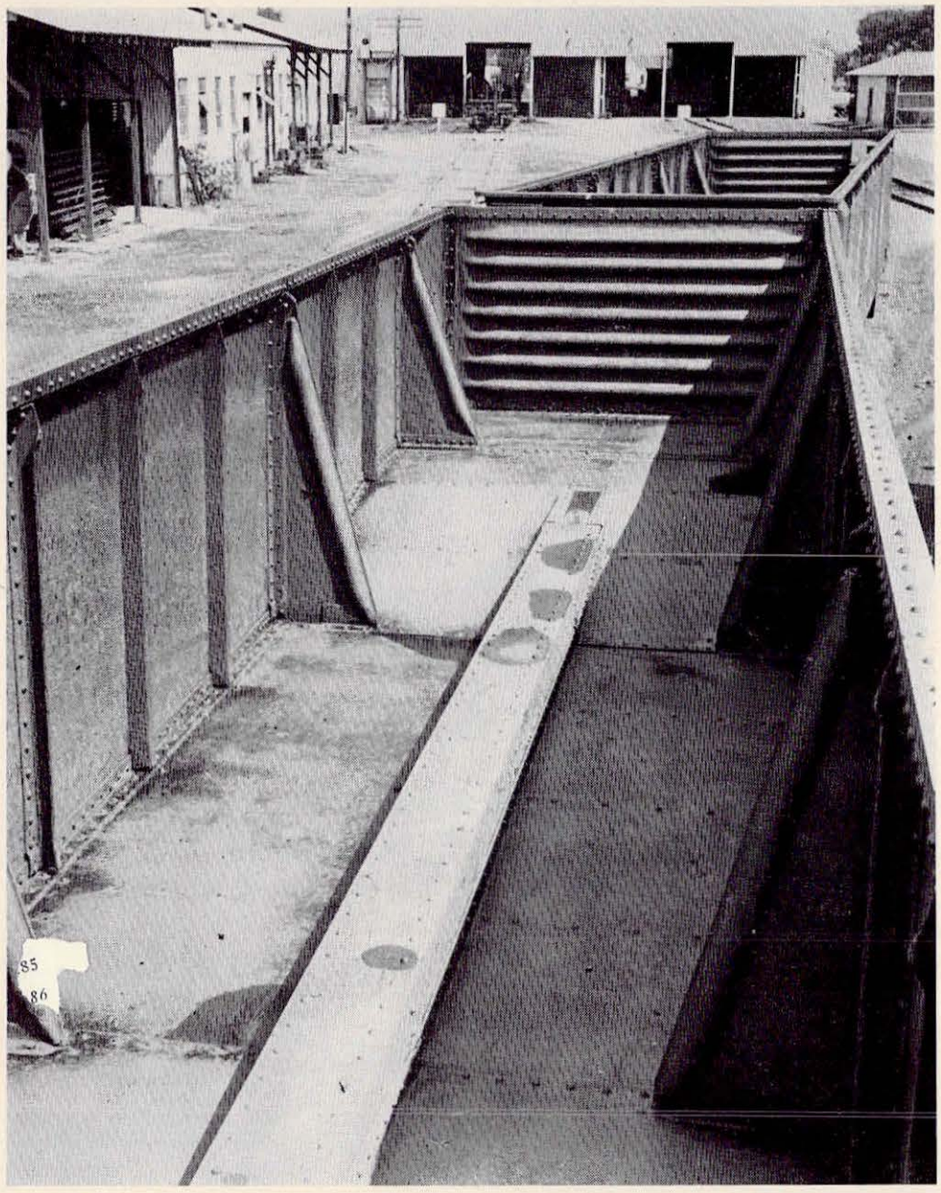
Years ago, I knew a highly respected locomotive engineer who was a successful portrait photographer on the side. And train and engine employees, with their relatively high pay and sometimes short hours, have often gone into farming as an avocation. There must be many cases of railroad people who have been outstandingly successful in such side occupations. If you know of any such, please tell me about them.

OPENINGS FOR THE VERSATILE—I am not talking about fellows who started railroading, but left it to become highly successful in some other industry (e.g. Walter Chrysler). Instead, what I mean are the people who have kept right on railroading, while showing their versatility by parallel success in some other vocation.

There hasn't been nearly enough information recorded in print of the highly interesting opportunities railroading itself offers to able people—and the equally interesting side-lines many railroaders get into, without harm to their railroad work.

The people I find it hardest to understand are those nurtured in the railroad business, who later turn against it. Fortunately, there aren't very many such people, but there are a few I could name. What makes them do this, anyhow? Any suggestions?

C&IM Sprays Gons for Long Life



C&IM GONDOLA CAR 7137 looks like this today.

Cold spray paint, using Sherwin-Williams Carclad, continues to give excellent results on Chicago & Illinois Midland gondola cars (RA, Jan. 24, 1955, p. 33).

Since an experimental application in June 1952, a total of 272 gondola cars have been sprayed inside and out. This year 172 cars sprayed in 1954 and 55 sprayed in 1955 are coming through the shop. While the cars were in service beyond the estimated two-year life of the coating, inspection shows the interiors to be in very good condition. There is some corrosion in the lower third of car sides and in car bottoms, but heavy pitting and flaking has been eliminated.

Possibilities of a one-coat surface application with increased dried-film protection led to comparative tests run in the C&IM's Springfield shops on May 14 and 15, 1957, using Carclad black hot spray and Carclad black cold spray. The hot spray test was made on grit-blasted hopper cars 6309 and 6037. After one coat of cold spray Gripclad primer, the hot spray was applied, using Spee Flo's hot spray Circa-Flo unit. The one coat application of hot spray gave a dried film thickness of two to three mils The quantity of paint used was 4¼ gal per car.

Hopper cars 6269 and 6296 were also grit-blasted and primed with one coat of cold spray Gripclad primer followed by two coats of Carclad cold spray. The finish of the two coats showed a dried film thickness of one mil. The material used on the two cars was 12½ gal reduced, or 6¼ gal per car. The actual Carclad black used before reduction was 8.43 gal, plus 4.16 gal of Carclad reducer required to atomize the cold spray. On a per car basis, 4.17 gal of black cold spray and 2.08 gal of reducer were used.

Comparison of the two systems shows that a one-coat application of hot spray gives more than double the film thickness obtained with two coats of cold spray. With 4¼ gal of hot spray at $15.94 and two coats of cold spray at $17.61 per car, there is a saving in material costs of $1.67 per car, plus labor costs of $0.41 for application of an extra coat. The application of the hot spray reduced the fog in the shop and the amount of overspray.

The hot spray method was started on July 1, 1958, and will be used exclusively from now on. The one-coat hot-spray application speeds up processing cars through the shop. C&IM officials are also not overlooking the advantages of a better and thicker film which could extend the previous two-year life to perhaps four years.

Do Experiments Attract Passengers? (*Continued from page 21*)

to solve the problem, or even make large dents in the passenger deficit. But by the same token, the will to experiment is a healthy sign. The PTO's and their top management aren't, by and large, ready to give up (even if regulatory agencies permitted them to). One or a combination of innovations now being tested may show the way for a more profitable—or less costly—tomorrow.

Missouri Pacific views it this way:

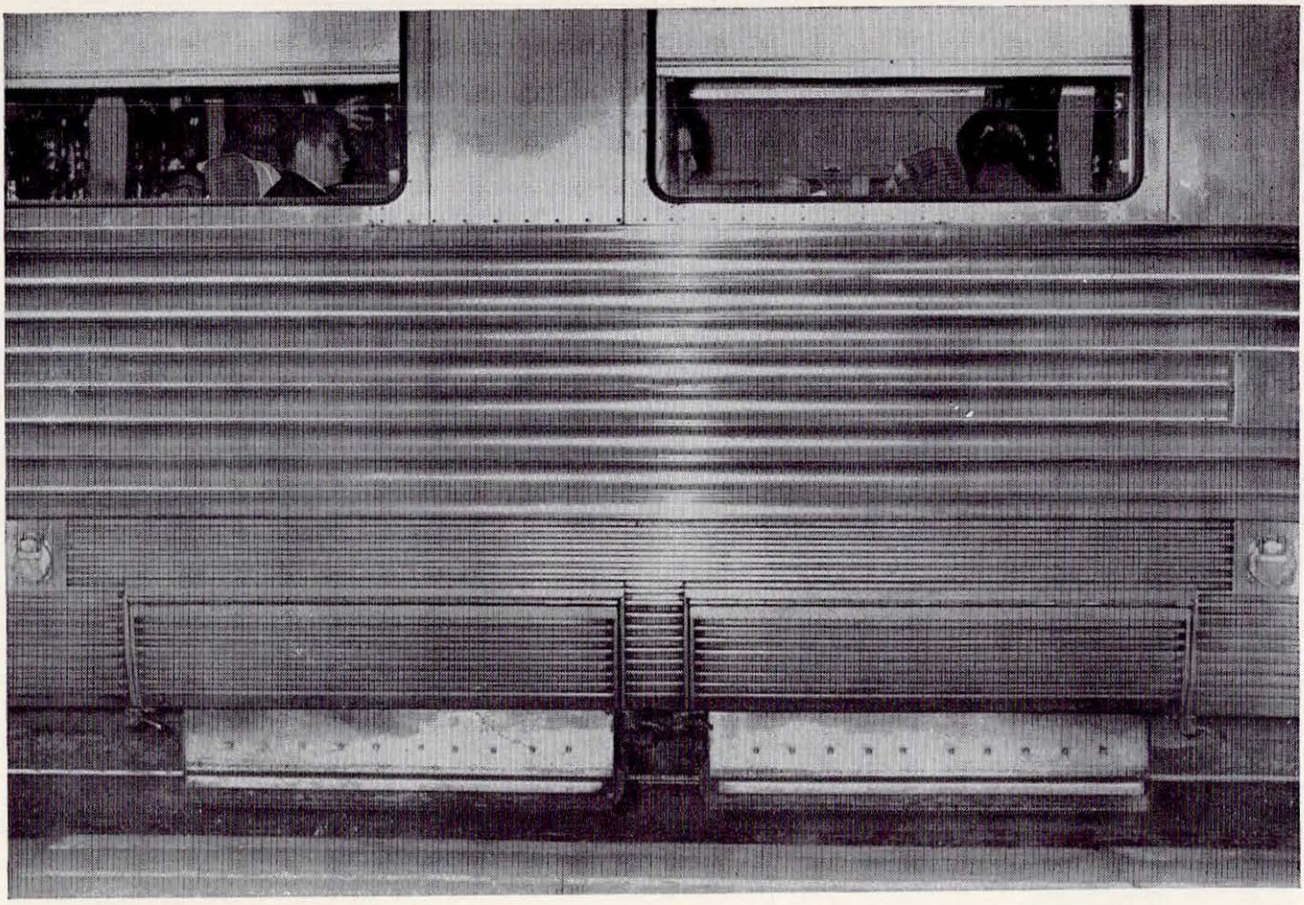
"We must recognize the fact that these various experimental arrangements are being conducted in the face of a general decline in economic conditions and, of course, we could not expect these few isolated experiments to have any material effect on our gross revenue figure. But we are convinced that what we are attempting has increased our passenger traffic under extremely adverse business conditions and has materially benefited our lines from a public relations standpoint."

That philosophy seems to hold true in most of the present experiments. In some places business is better. In others business is off, but off far less than it might have been. Among roads willing to experiment, willing to try something new, there doesn't appear to be a loser. ●

Merry Christmas

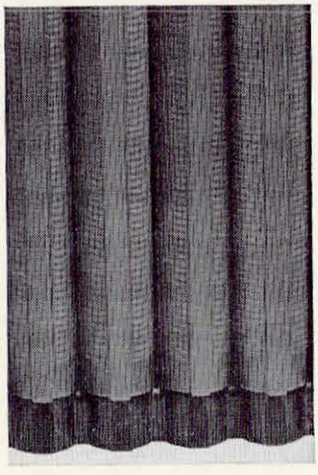
W. H. MINER, INC.

CHICAGO



Why Exide-Ironclad Carlighting Batteries Last Longer Even Under Severe Conditions

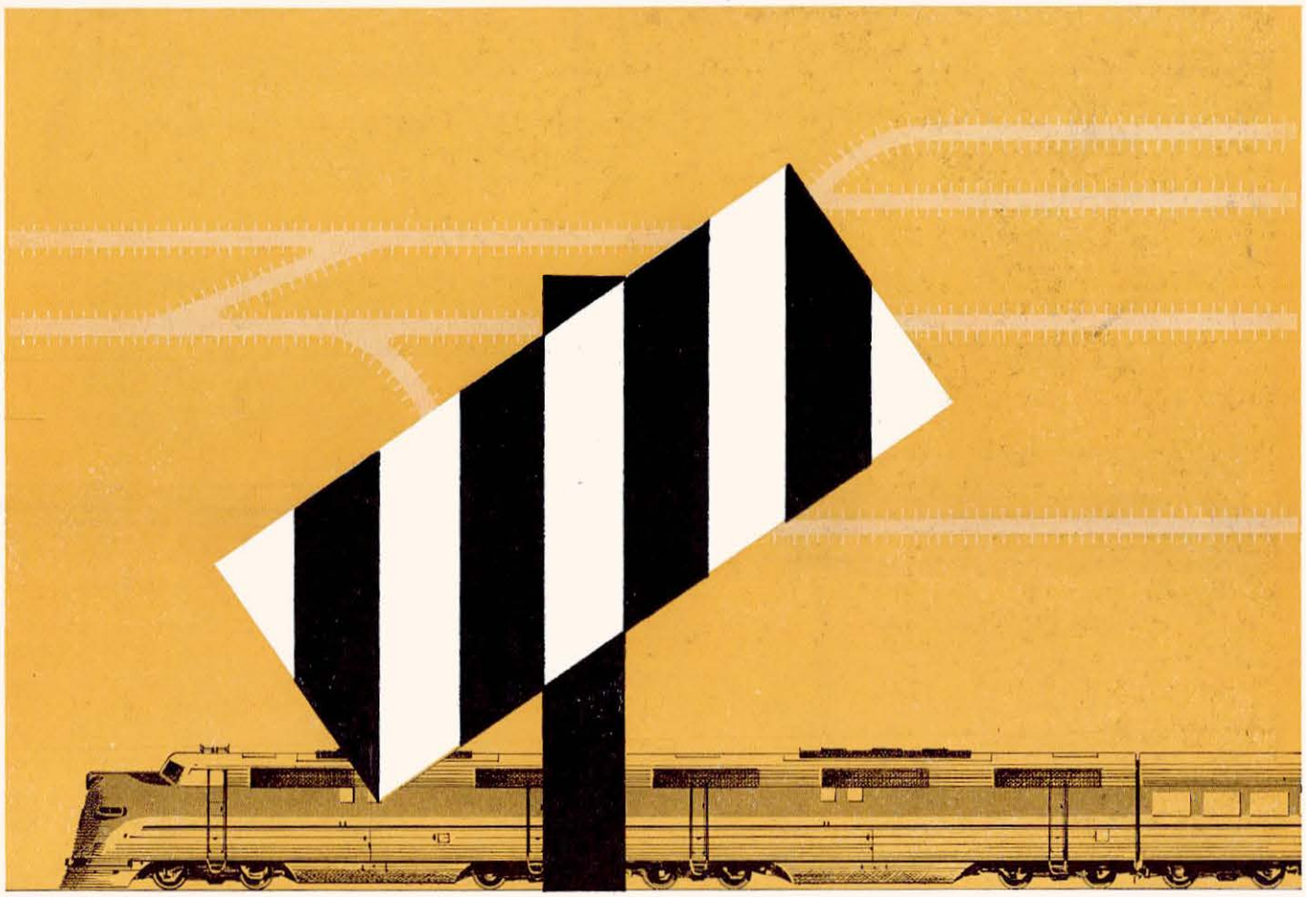
Best buy in a railway carlighting battery. Exide-Ironclad, engineered to give you maximum life and dependability even under the trying service conditions of railway service.



Tubular positive plate. Unique Exide-Ironclad construction. Active material is held captive inside plastic power tubes. Keeps its power for years of use.

The big difference between Exide-Ironclad Batteries and others is the positive plate. Instead of sticking tenuously to a vertical surface, active material in an Exide-Ironclad positive plate is held firmly captive inside the power tubes of slotted polyethylene. Tiny openings let electrolyte in, but keep active material from falling out. In high-load applications, especially, this unique design has proved to be a valuable battery life stretcher. So Exide-Ironclad Batteries give you years longer life for greater return on your battery investment. Make sure you get all the battery value your dollar can buy. Specify Exide-Ironclad. For complete technical details, write Exide Industrial Division, The Electric Storage Battery Company, Philadelphia 2, Pa.

Exide®



NO OTHER R. R. SIGNS *install so easily last so long require so little upkeep or make such an ideal base for message materials. When you consider their savings . . . compare their light weight, strength and corrosion resistance could you really afford anything else* BUT ALUMINUM?

KAISER ALUMINUM *the bright star of metals*

NEW BROCHURE TELLS YOU WHY!

Free! Gives complete details on the cost-saving benefits you enjoy with railroad signs and crossbucks made of Kaiser Aluminum. Includes availabilities, engineering information, installation data. Mail coupon for your free copy today!

KAISER ALUMINUM & CHEMICAL SALES, INC.
Dept. TR-921, 919 N. Michigan Ave., Chicago 11, Ill.

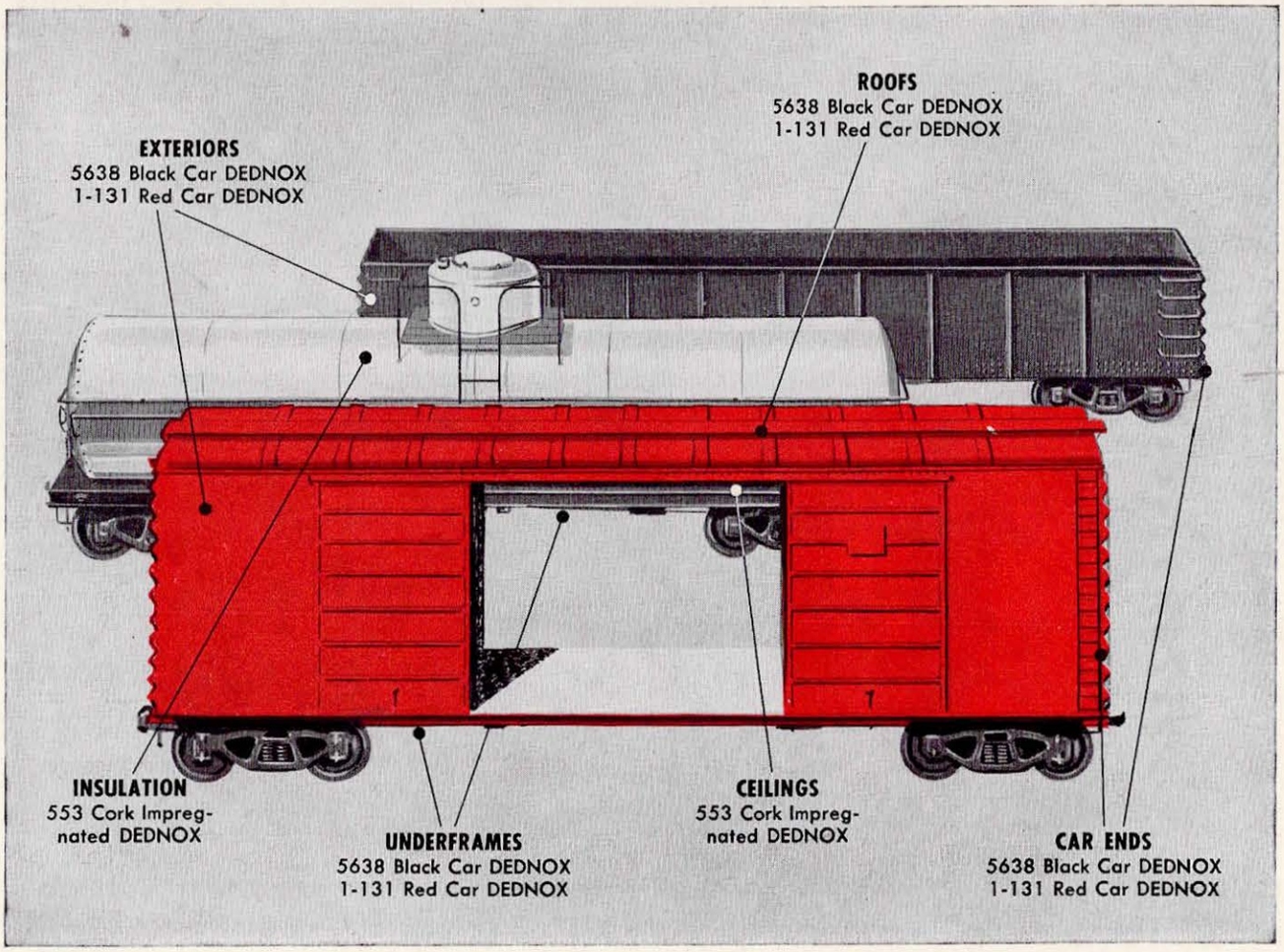
Please send me your new railroad sign brochure. ☐
Please have a representative call personally ☐; phone ☐

NAME_____

ADDRESS_____

CITY_____ ZONE_____ STATE_____

Keep your rolling stock rolling...



Protect these Trouble Spots with Time-Tested PITT CHEM DEDNOX® Coatings

MAINTENANCE of rolling stock is much too costly to consider half-way corrosion control methods. Only the application of a *proven*, heavy-duty protective coating assures adequate long-term protection.

Pitt Chem *Insul-Mastic* DEDNOX Coatings afford this protection because they are specifically geared to meet the variety of rugged conditions encountered "on the road."

For almost thirty years DEDNOX has given long-lasting, economical protection to railroad equipment. Special formulations of gilsonite (one of the most chemically resistant bitumens known), with selected asphaltic bases and mineral fillers, permit DEDNOX coatings to withstand extreme variations of temperature, moisture, dryness and abrasion.

Don't contribute your share to the estimated $300 million annual cost of corrosion damage to rolling stock. Protect surely and economically with Pitt Chem *Insul-Mastic* DEDNOX Coatings.

For complete Pitt Chem DEDNOX information and/or technical service write or call *Pittsburgh Coke* today.

PROTECTIVE COATINGS DIVISION
PITTSBURGH
COKE & CHEMICAL CO.
Grant Building • Pittsburgh 19, Pa.

WSW 7143A

PROTECTIVE COATINGS • COAL CHEMICALS • PLASTICIZERS • ACTIVATED CARBON • COKE • CEMENT • PIG IRON

NEW PLASTIC HATCH COVER and PLUG

- reduces weight 50%-60%
- twice as easy to lift
- won't rust or corrode
- better insulation

A new development from Standard . . . the reinforced Plastic Combination Hatch Cover and Plug. This product's inherent savings in maintenance time and money result from Standard's feeling of "responsibility" to produce new and better products for the railroads...a "responsibility" that pays-off for you.

Made of glass reinforced polyester resin, this new hatch cover and plug design cuts weight down to 65 lbs. including hardware and gasket . . . 70 lbs. *less* than the conventional plug. There's a big plus in the new ease of handling at the icing stations, too!

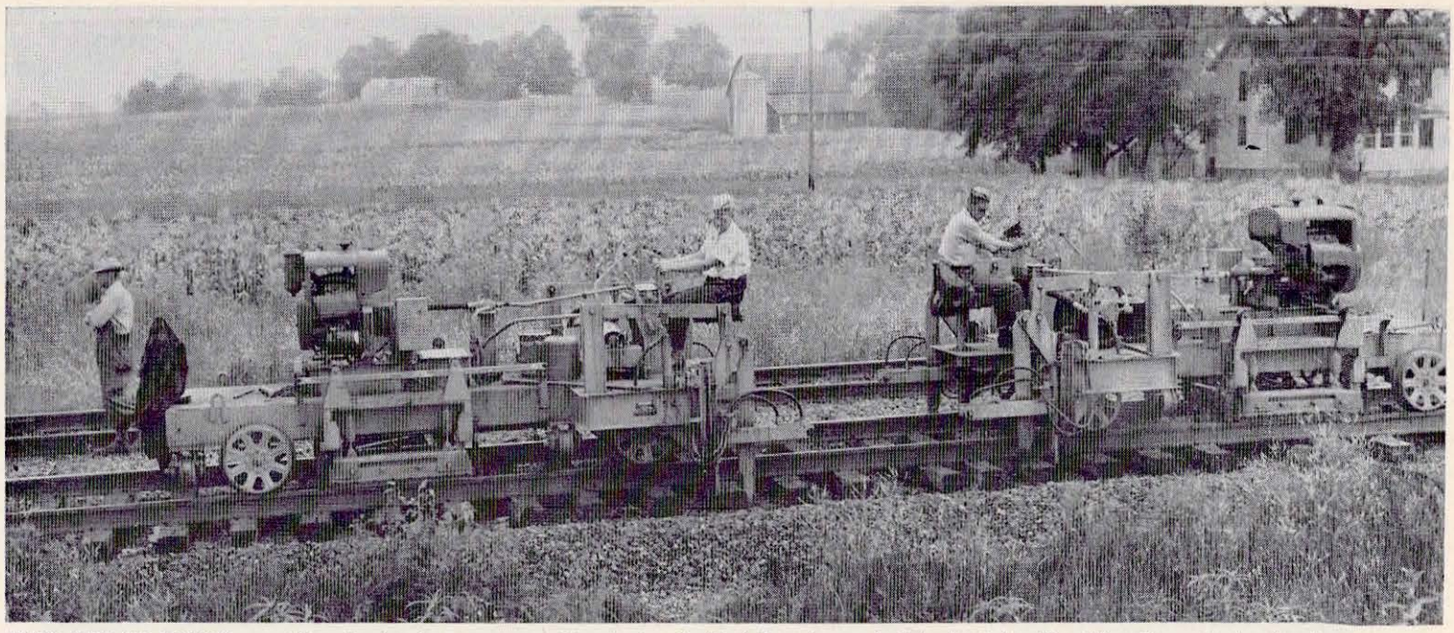
The Plastic Hatch Cover and Plug is suitable for either Standard's welded design or new integral design Hatch Frame and will not rust or corrode. Salt and brine have no effect. And the Plastic Plug's core of insulation gives greater resistance to heat transfer. Your own choice of hardware can be used.

Ask your Standard representative for information on how the new Plastic Hatch Cover and Plug can go to work for you.

STANDARD RAILWAY EQUIPMENT HAMMOND, INDIANA

division of STANDARD RAILWAY EQUIPMENT MANUFACTURING COMPANY

CHICAGO, ILLINOIS • NEW YORK, NEW YORK • SAN FRANCISCO, CALIFORNIA



TWO TIE SPACERS, working in tandem, respace ties in track that has been skeletonized by the Mannix undertrack plow.

Tie Spacers Work Fast, Cut Costs

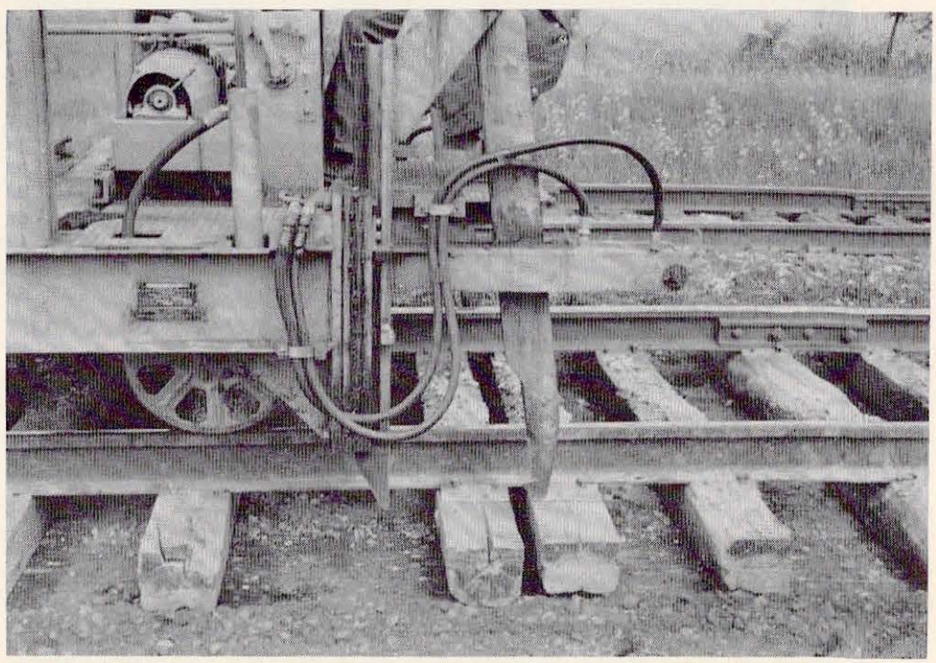
One of the most recent track-maintenance operations to be mechanized is the respacing of crossties. The need to respace ties—to eliminate skewed-tie conditions or to increase or decrease the number per rail length—doesn't occur very often. When it does the work involved is laborious and time consuming. That is, it was until the development of machines for doing the work.

Take, for example, the experience of the Chicago & North Western. Mechanical tie spacers were used for the first time on this road during the 1958 working season. Benefits were two-fold. First, with two machines working as a team, the rate at which the work was done showed a marked increase. Second, with the number of required men reduced by 20, the cost dropped sharply.

For several years the C&NW has been using the Mannix undertrack plow to dispose of old, fouled ballast in advance of tie-renewal and reballasting operations. Since it leaves the track in a skeletonized condition, the operation of the plow provided an opportunity to respace the ties under ideal conditions.

It was found that the respacing operation, even though a relatively large number of men were assigned to it, was delaying tie-renewal work. To overcome this difficulty, it was decided to use two Pullman-Standard Tie Spacers behind the plowing operation.

There were three places in the road's 1958 maintenance program where use of the tie-spacing machines was indicated. C&NW standard is 23 ties per 39-ft rail. At two main-line locations where the tracks were to be raised and ballasted, the ties averaged 21 per rail. At another, on a busy freight line, tie spacing was 24 per rail. Hence, every tie at these locations had to be shifted to a new location.



TONGS at end of tie spacer are in position here to grasp a tie and shift it to its new position. Operator rides on machine between the tongs.

At all three locations, the undertrack plow was used to remove the crib ballast and place it in windrows along the track shoulder. While the track was in raised position during passage of the plow, the ties to be renewed were knocked loose with sledges. The ties were then removed from the track with tongs.

Directly behind the plow, the ties were respaced. New ties were inserted to re-

(*Continued on page 34*)

RAILROADERS' BEST FRIEND

IT'S "WORKING FRICTION"... the friendly kind that helps cut down lading damage claims and car maintenance costs. You find it in the new MARK 40—the amazing HIGH ABSORPTION, LOW REACTION *friction* draft gear. Developed by Cardwell Westinghouse, the MARK 40 has the capacity to absorb 42,420 foot-pound* impacts. Fits standard 24⅝ inch pockets...has 3¼ inches of travel. These features make the MARK 40 friction gear the answer to today's heavier railroading requirements. No wonder it's the railroaders' best friend!

*The new MARK 40 is the highest capacity *friction* draft gear ever offered for standard pockets.

WESTINGHOUSE

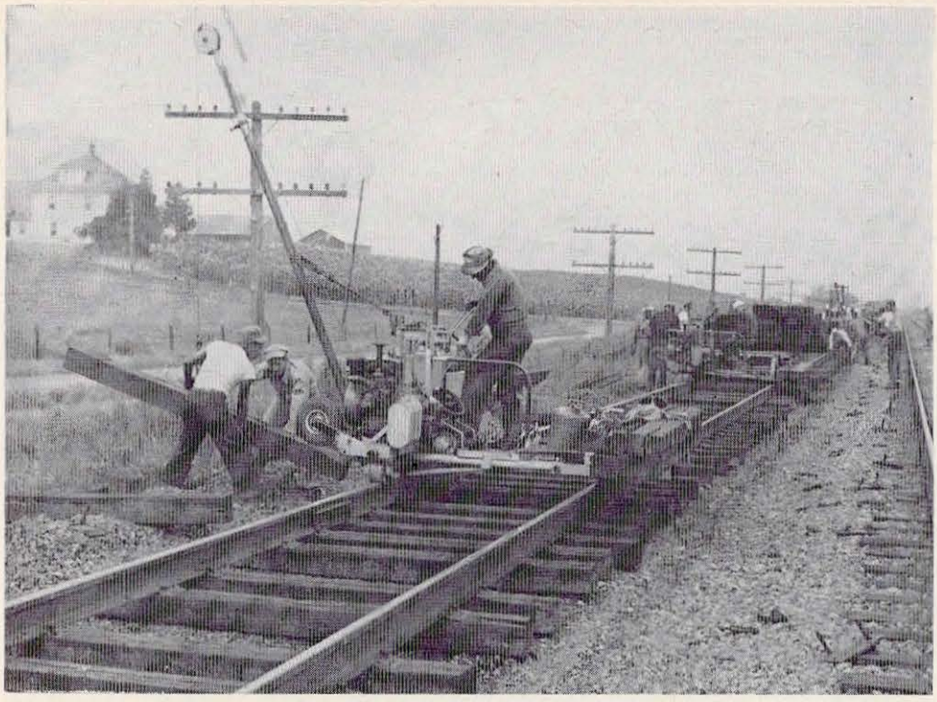
MARK 40

FRICTION DRAFT GEAR

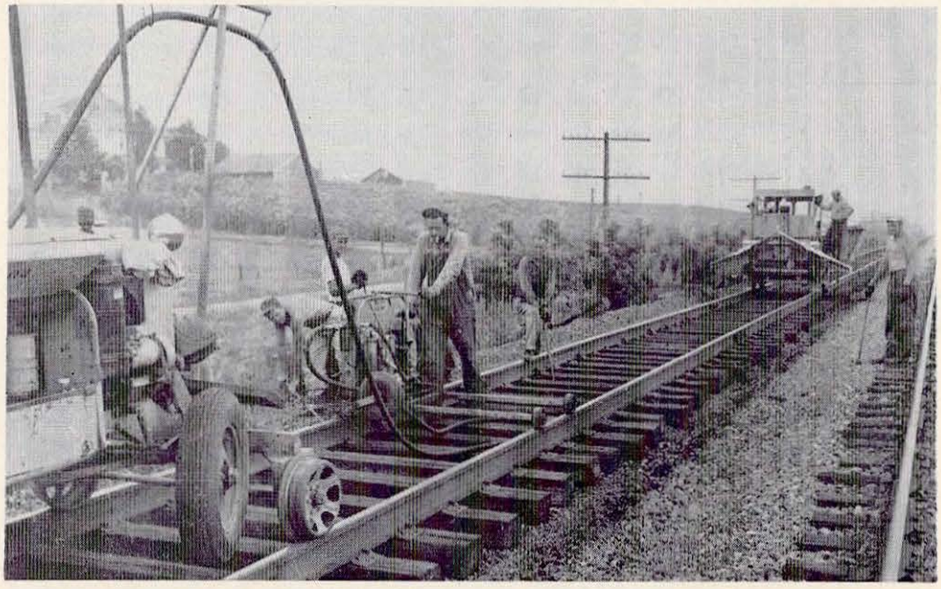
(A. A. R. CERTIFICATE NO. 35)

CARDWELL WESTINGHOUSE COMPANY

332 So. Michigan Ave., Chicago 4, Illinois
Canadian Cardwell Co., Ltd., Montreal 18, Quebec



FAIRMONT Tie Handler with boom getting a tie in position for insertion. In background is Tie Handler without boom, which is pulling the new ties into position in the track.



SPIKE DRIVING is done by Racor dual spike driver supplied with air by Tractair mounted on flanged wheels. Machine in background is Kershaw Ballast Regulator.

TIE SPACERS WORK FAST (*Continued from page 32*)

place those that had been removed. This work was performed by a mechanized gang with the two tie spacers. Here is the sequence of operations:

A water-spray car, consisting of a converted Fairmont weed burner, was used to spray water on the rails to cool them. This relieved expansion stresses and reduced the possibility of sun kinks in the skeletonized track. Next, a laborer using a wood template keel-marked the centers of the 23 ties in each rail length on the ball of one rail.

The tie spacers followed, working in tandem. The usual practice was for each machine to space the ties in every other rail length. Each machine was manned by a machine operator. A single laborer accompanied each tie spacer. His function was to assist the machine by raising the spikes when it was necessary to move an intermediate tie to a joint-tie position, or to place it beyond the point. Occasionally, the laborer also loosened the spikes in ties that offered unusual resistance to movement.

Behind the tie spacers, two Fairmont Tie Handlers with booms were used to place the new ties in position for insertion. A third Tie Handler without a boom pulled them into place. The spikes were driven by two Racor dual spike drivers operated by air supplied by two LeRoi Tractair compressors mounted on flanged wheels. After the tie-spacing and renewal operations, the track was ballasted and surfaced by a separate organization.

Before use of the two tie-spacing machines, tie work had been unable to keep up with the undertrack plow. With the tie-spacers in operation, tie work was speeded up so all operations moved forward at about the same rate.

Operated by One Man

The Pullman-Standard Tie Spacer, operated by one man, is a self-propelled machine powered by a 4-cylinder Wisconsin engine. It is designed to space and straighten new and old ties during heavy tie-renewal operations, and to space and straighten ties in out-of-face work where the number of ties per rail is changed.

Two pairs of tie grippers or tongs are mounted at one end of the machine outside the track rails. The operator rides on the machine between the tongs, where he has an unobstructed view of the tie being moved. By hydraulic controls he can cause the tongs, together or individually, to grasp a tie for spacing, nipping or straightening. While the tie is in the grip of the tongs, he can shift it laterally by moving the machine. During this operation, two magnetic brakes underneath the machine are applied to the rails. Then, the entire 7,900-lb machine is moved the required distance by a hydraulic ram. Each ram movement will cover 23 in.

One side of each tong is a stationary post butted against the frame of the machine. Because they are directly opposite each other, the tongs assure placement of ties at right angles to the rails. The tongs which open when raised, have a spread of 15½ in. They close to 6 in. The machine is equipped with a stop. This limits the downward stroke of the tongs when the unit is being used behind an undertrack sled or plow.

The machine may be set off the track by a ratchet wheel or by pushing. It travels light at speeds up to 25 mph.

Improvements in recent models make them faster operating, lighter in weight, and 20 per cent more powerful. A self starter has been added to the engine. Space is provided between the tongs for spike driving. The manufacturer is working on a spike-driver attachment.

NEW DESIGNS IN CATERPILLAR EQUIPMENT AND PARTS DEPEND ON CREATIVE USE OF HIGHEST QUALITY STEEL

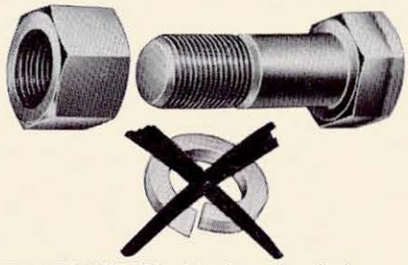
Example: Track hardware, made of stronger pre-tested steel and "Hi-Electro" hardened, stays tight without lock washers, often lasts through two sets of shoes

How much does it cost to pull a tractor off a job to tighten or replace track hardware? It costs plenty, in down time and in service time. That's why Caterpillar's new track hardware is such a good investment.

Caterpillar hardware normally stays tight without the use of lock washers throughout the service life of the first set of track shoes. And, exclusive "Hi-Electro" hardening of dome-shaped bolt heads often permits bolts to be used for a second set of shoes.

Most track hardware looks pretty much alike, but there's a big difference in quality. Steel, for instance. All steel for Caterpillar's new track bolts has a minimum tensile strength of 151,000 pounds per square inch, well above the SAE standard of 120,000-140,000.

The special steel accepted for track hardware is furnace-heated, quenched and tempered to toughen the entire bolt against breaking,



ELIMINATION of lock washer is feature of Caterpillar's new track hardware.

bending and the permanent stretching that leads to loosening of the nut.

Carbon, lost from the surface area in mill rolling and heat treating, is restored by Caterpillar with a carefully controlled, carbon-atmosphere process. Then threads are "rolled" into the bolt, curving the natural flow lines to follow the thread contours, producing threads that are highly resistant to stripping.

The large dome-shaped head receives an exclusive deep and even "Hi-Electro" hardening. This protects the hexagonal corners from mushrooming. Wrenches fit onto Cat bolts after many hundreds of hours of hard use.

This same quality of material, design and manufacture is found in *all* Caterpillar parts. See your nearby Caterpillar Dealer today. Remember, he'll carry your parts inventory.

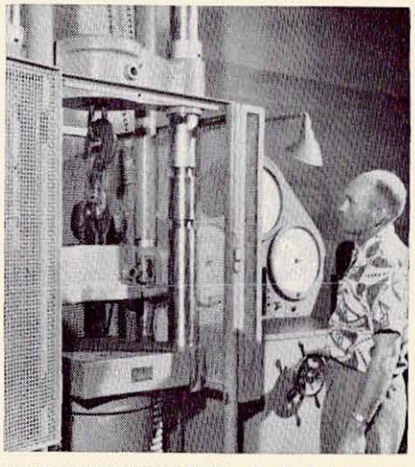
Caterpillar Tractor Co., Peoria, Illinois, U. S. A.

SERVICE TIP

A torque wrench should always be used to tighten track hardware to factory-recommended torque values. Your Operating and Maintenance Instructions give exact values for each tractor model.

CATERPILLAR

Caterpillar and Cat are Registered Trademarks of Caterpillar Tractor Co.



TENSILE STRENGTH of a bolt is tested in Caterpillar Laboratories. Each bolt is capable of supporting the full weight of the tractor for which it is designed.

DON KOPP, Master Mechanic, McCann & Co., Inc., Springfield, Ill.: "We're real boosters of genuine Cat parts, especially track parts. Other brands just don't last as long. When you buy Cat parts you know they are going to fit, last longer and give the best service because they are built to do the job by the people who built the machines."

Money Makes Money

Capital improvements can pay for themselves. Many roads are upgrading their physical plants and improving their operations with new expenditures that bring in handsome returns. Signaling projects that pay off include: centralized traffic control, automatic highway crossing protection with short-arm gates, snow melters, and car retarder installations. They improve operations, reduce annual expenses and bring in a fine return long after they have paid for themselves. Here are some examples of "spending money to save money" gleaned from annual reports of the Signal Section, Association of American Railroads.

Automatic Gates Return 44 Per Cent

One eastern railroad installed flashing-light signals and automatic short-arm gates at 13 street crossings in a city. Before the installation, 10 crossings had manual gates with gatemen on duty three tricks daily plus groundmen on duty three tricks daily. Three crossings had automatic flagmen with groundmen on duty 2 tricks daily. The 13 crossings are now protected automatically, 24 hours daily, with these advantages:

1) Dependable 24-hour operation; 2) uniform and more effective type of protection; 3) increased safety for both street and railroad traffic; 4) reduction in operating expenses.

Economic Statement:

Capital Investment	**$343,091**
Operating Expenses	**25,864**
Total	**368,955**
Gross Savings Per Annum	**185,600**
Increased Annual Operating Expenses	**2,600**
Net Reduction in Annual Operating Expenses	**183,000**
Deduction for Interest Charges at 6% on Capital Investment	**20,585**
Net Savings Annually	**$162,415**
Annual Return over 6% Interest	
On Capital Investment (Net Savings divided by Capital Investment)	**47.3%**
On Total Cost (Net Savings divided by Total Cost)	**44.0%**

CTC Returns 12.5% Annually

A western railroad installed centralized traffic control on 74 miles of single-track mainline. Prior to the CTC, trains were operated under time-table and train orders. The only signaling was at railroad-crossing interlockings and signals associated with spring switches at one end of three sidings. There are now four sidings in the territory, all equipped with power switches and controlled signals. Sidings are signaled throughout. Intermediate signals are on the mainline between sidings. Electric locks are on all main track hand-throw switches, with the exception of eight switches within yard limits at one town. A complete new pole line was built for this CTC installation.

Advantages include: (1) reduction in train hours; (2) reduction in overtime hours for train and engine crews; (3) reduction in stops for long, heavy freight trains with resultant saving in fuel costs and wear and tear on equipment; (4) reduction in cost of directing train movements; and (5) providing of signaling for improving safety of train movement.

Economic Statement:

Cost of Installation (including track changes)		
Capital Investment	**$551,753**	
Operating Expenses	**25,828**	
Total		**$577,581**
Gross Annual Savings		**119,296**
Increased Annual Operating Expenses		**14,000**
Net Reduction in Annual Operating Expenses		**105,296**
Deduction for Interest Charges at 6% (capital investment)		**33,105**
Net Annual Savings		**72,191**
Annual Return over 6% Interest:		
On capital investment (net savings divided by capital investment)		**13.08%**
On total cost (net savings divided by total cost)		**12.50%**

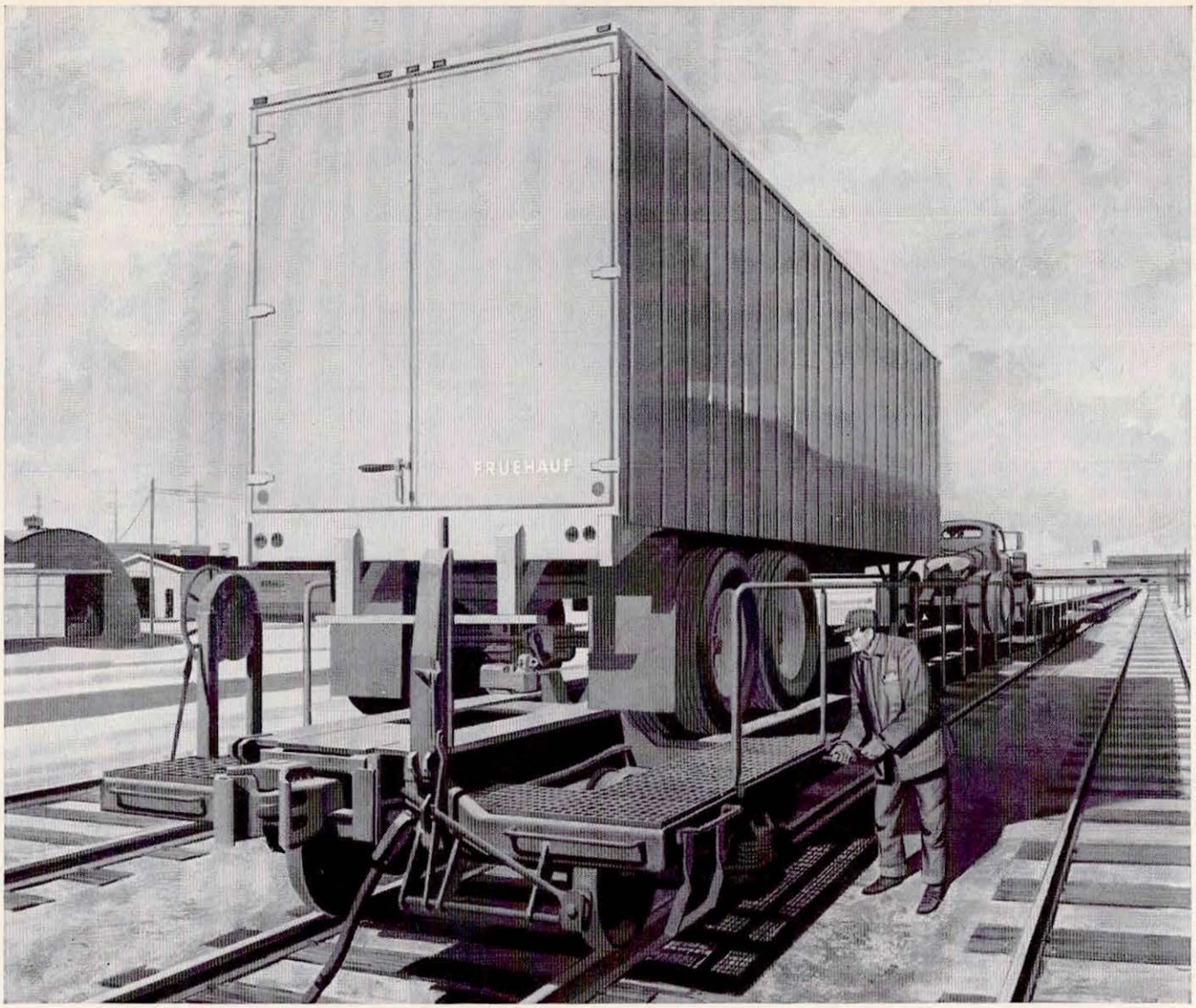
Propane Switch Heaters Save Money

One western railroad installed propane gas switch heaters at 20 power operated switches in mountain territory where snowfall is from 2 to 6 ft each winter. This is in CTC territory. The heaters are remotely controlled by the dispatcher. Before the heaters were installed, one or two men were needed at each end of a siding to clear snow away from the switches. Kerosene-type heaters were used, being lighted by the track forces who maintained them.

As part of the agreement with the propane gas supplier, the railroad leases the gas tank for a period of 7 years, after which the rental does not apply. Normally, the supplier uses tank trucks to fill the propane tanks. If roads are blocked by snow, the railroad will furnish tank cars in work train service for refueling.

Propane heaters have provided continuous operation of switches during winter months. Prior to propane heaters, sidings occasionally had to be taken out of service, because track forces were not able to clear away a heavy, drifting snow. The biggest advantage of propane heaters has been their economy. The cost breakdown:

CONTINUED ON PAGE 38 ►



In every phase of piggybacking, you save money with the Clejan* car

With Clejan Piggy Back, weight savings alone can mean the difference between profit and loss!

Lightest piggyback car in tare weight. The standard Clejan car weighs only 50,000 lb.—20,000 lb. less than the next lightest car.

Lowest priced piggyback car. The Clejan car is designed exclusively for piggyback service; elimination of non-essentials brings costs down.

Fastest to load and unload. In less than a minute, one man on the ground can lock a trailer into place. Guided loading and built-in mechanical tie-downs reduce man-hours at terminal points.

Permits intermix of trailers and containers. It's the only piggyback car that requires no modification.

Most economical to operate. Less weight means fewer trains are needed. Speed and ease of loading mean faster train make-up, and less yard switching.

Best railroad clearance. It is the only piggyback car that can take a standard trailer, 12′ 6″ in height, over all major rail lines.

Maximum protection for lading, trailer or container. Due to patented shock absorbing devices that permit the trailer to move 10″ under impact, there is 75% reduction in impact to trailer and ladings, over impact to rail car at 8½ mph. *These are some of the reasons why the Clejan car is becoming the standard of industry.*

Clejan cars represent 10% of all piggyback cars in service —yet in 1957, they carried 25% of all piggyback freight.

For further information on Clejan Piggy Back, call or write the nearest General American office. You'll find . . . *it pays to plan with General American.*

**CLEJAN—pronounced CLAY-JOHN*

GENERAL AMERICAN TRADE MARK

Piggy Back Division

GENERAL AMERICAN TRANSPORTATION CORPORATION

135 S. LaSalle St. · Chicago 90, Ill. · FInancial 6-4100

Money Makes Money

(*Continued from page 36*)

Annual Expenses Before Propane Heater Installation—	
Trackmen—10 extra men for 4 months	**$10,400**
Trackmen—penalty time	**13,000**
Kerosene	**1,500**
Repair kerosene heaters	**200**
Work train delivery	**600**
Heating and maintenance of shelters	**2,000**
Maintenance of kerosene storage tanks	**250**
Total for 20 switches	**27,950**
Average per switch	**1,397**
Annual Expenses After Propane Heater Installation—	
Trackmen—penalty time	**$5,000**
***Tank rental—at $75 each**	**1,500**
Propane gas, 17,200 gal at $0.20 per gal	**3,440**
Work train delivery propane gas	**600**
Removal and reinstallation of burners	**1,600**
Gas heater repairs	**300**
Total for 20 switches	**12,440**
Average per switch	**622**

Economic Statement:

Cost of Installation:		
Capital investment	**$26,660**	
Operating expenses		
Total		**$26,660**
Gross Savings Annually		**27,950**
Increased annual operating expenses		**12,440**
Net reduction in annual operating expenses		**15,510**
Deduction for Interest charges at 6% on investment		**1,600**
***Net annual savings**		**13,910**
***Annual return over 6% interest:**		
On capital investment (net savings divided by capital investment)		**52.2%**
On total cost (net savings divided by total cost)		**52.2%**

**After 7 years tank rental ceases, at which time savings will be:*

Net annual savings ($13,910 + $1,500)	$15,410
Annual return over 6% interest—	
On capital investment (net annual savings of $15,410 divided by investment)	57.8%
On total cost (net annual savings of $15,410 divided by total cost)	57.8%

Electric Switch Lamps Save Money

One eastern railroad has converted 1,000 oil-lighted switch lamps to electricity, using replaceable batteries. In addition to the economic advantages, electric switch lamps are more visible, provide more uniform aspects, outages from high winds are eliminated, and substantial manhours are eliminated from maintenance of the oil type. Also, fire hazard is eliminated.

Economic Statement:

Cost of installation (1,000 switch lamps)		
Capital investment	**$90,470**	
Operating expense	**5,600**	
Total cost		**$96,070**
Gross annual savings		**63,170**
Increased annual operating expenses		**25,670**
Net reduction in annual operating expenses		**37,500**
Deduction for interest charges at 4.5% (on investment)		**4,071**
Net annual savings		**$33,429**
Annual return over 4.5% interest:		
On capital investment (net annual savings divided by investment)		**36.9%**
On total cost (net annual savings divided by total cost)		**34.8%**

Retarder Yard Returns 19 Per Cent

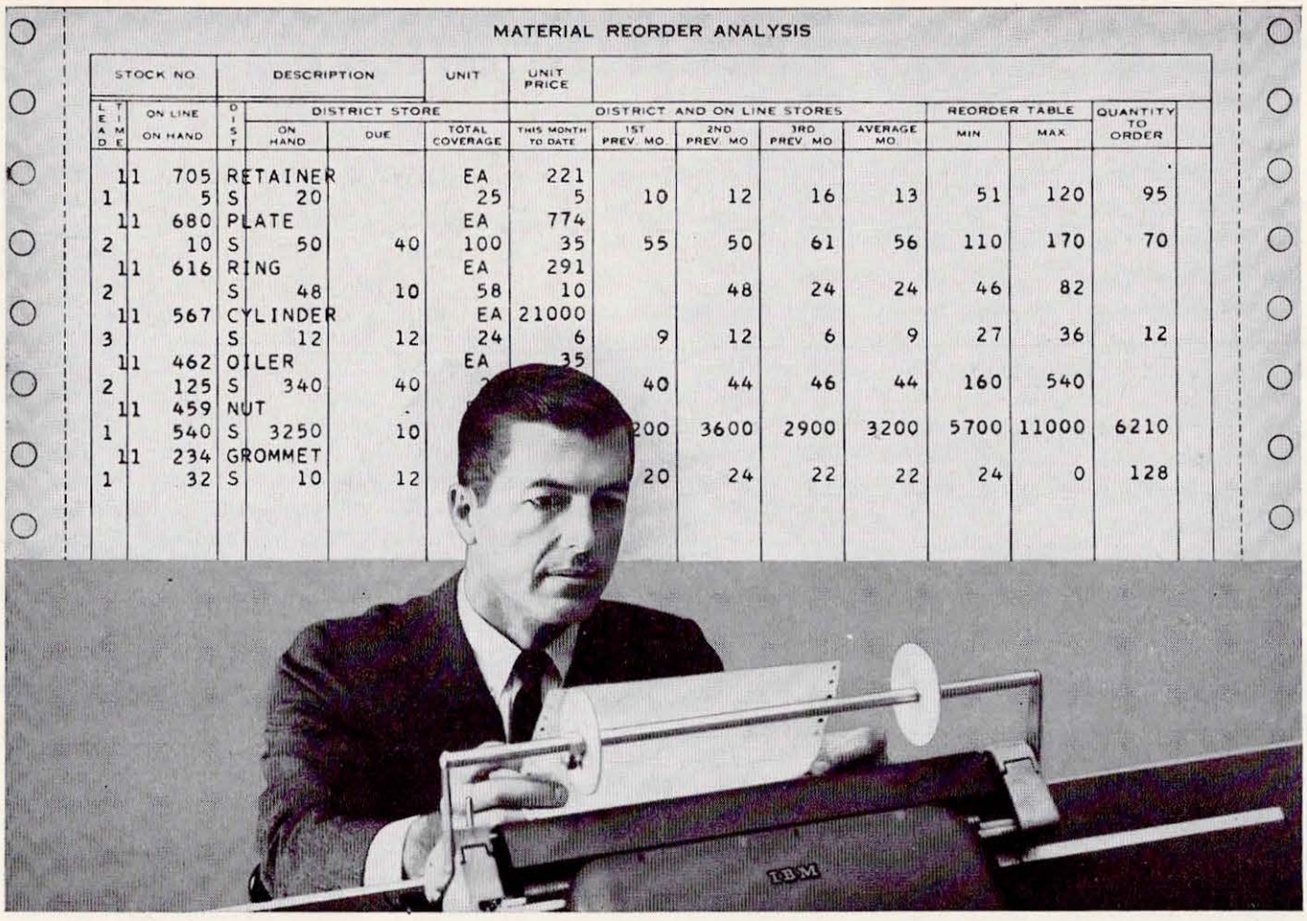
A western railroad replaced a flat switching yard with a modern gravity-type retarder classification yard with automatic switching, automatic retarder controls and other modern facilities including complete yard communications. Comparing operations and costs for a 4-month period with the old flat yard and the new retarder yard, these advantages were found for the new yard:

(1) Reduction in yard engine assignments and other personnel; (2) Decrease in final terminal delay payment; (3) Reduction in overtime payments for subyard switching; (4) Reduction in car cleaning costs; (5) Per diem savings, and (6) Increase in expense for signal maintainers, radio equipment installers, car retarder operators, skatemen and car foremen.

Economic Statement:

Cost of installation–		
Capital investment	**$6,030,279**	
Operating expenses	**1,926,754**	
Total		**$7,957,033**
Gross annual savings		**1,874,486**
Increased annual operating expenses		**144,507**
Net reduction in annual operating expenses		**1,729,979**
Deduction for interest charges at 4% (on investment)		**241,211**
Net annual savings		**$1,488,768**
Annual return over 4% interest:		
On capital investment (net annual savings divided by investment)		**24.7%**
On total cost (net annual savings divided by total cost)		**18.7%**

IN NEXT WEEK'S ISSUE:
How Kaiser Handles Its Freight


MATERIAL REORDER ANALYSIS
STOCK NO.
DESCRIPTION
UNIT
UNIT PRICE
LEAD TIME
ON LINE ON HAND
DIST
DISTRICT STORE
ON HAND
DUE
TOTAL COVERAGE
DISTRICT AND ON LINE STORES
THIS MONTH TO DATE
1ST PREV. MO
2ND PREV. MO
3RD PREV. MO
AVERAGE MO.
REORDER TABLE
MIN
MAX
QUANTITY TO ORDER
11 705 RETAINER EA 221
1 5 S 20 25 5 10 12 16 13 51 120 95
11 680 PLATE EA 774
2 10 S 50 40 100 35 55 50 61 56 110 170 70
11 616 RING EA 291
2 S 48 10 58 10 48 24 24 46 82
11 567 CYLINDER EA 21000
3 S 12 12 24 6 9 12 6 9 27 36 12
11 462 OILER EA 35
2 125 S 340 40 40 44 46 44 160 540
11 459 NUT
1 540 S 3250 10 200 3600 2900 3200 5700 11000 6210
11 234 GROMMET
1 32 S 10 12 20 24 22 22 24 0 128
IBM

ELECTRONIC STOREKEEPING

WITH IBM 305 RAMAC®

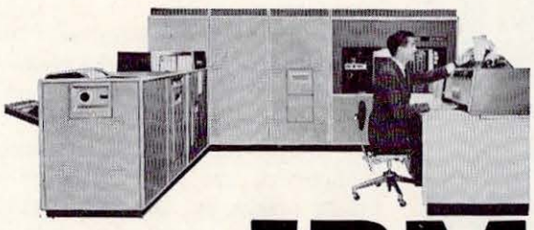
DELIVERS CURRENT STOCK BALANCE INFORMATION—INSTANTLY!

Fast inventory reports from IBM 305 Ramac can save many purchasing dollars for railroads. This "Electronic Storekeeping" system not only prevents costly out-of-stock situations but guarantees planned buying at the right prices.

Stock balance reports from Ramac signal items falling below predetermined minimums and for which no orders have been placed. Without delay, this information is available to the purchasing department for review and issuance of necessary purchase orders. Thus, purchasing is put on a controlled buying basis and an orderly flow of materials is assured.

IBM Ramac's unique "Random Access Method of Accounting and Control" means that the very instant an issue, order, receipt or transfer is processed, *all* affected account balances are updated with electronic speed and accuracy. Current dollar inventory balances for each material class are available at a moment's notice with Ramac's executive inquiry system.

Ask your IBM representative for a demonstration today. Have him show you where and how IBM Ramac's capabilities are related to your special storekeeping problems. Ask him to demonstrate how Electronic Storekeeping with IBM's 305 Ramac will prevent out-of-stock situations from occurring on your railroad.



DATA PROCESSING **IBM**®

590 Madison Avenue
New York 22, New York

Italy Pushes Electrification

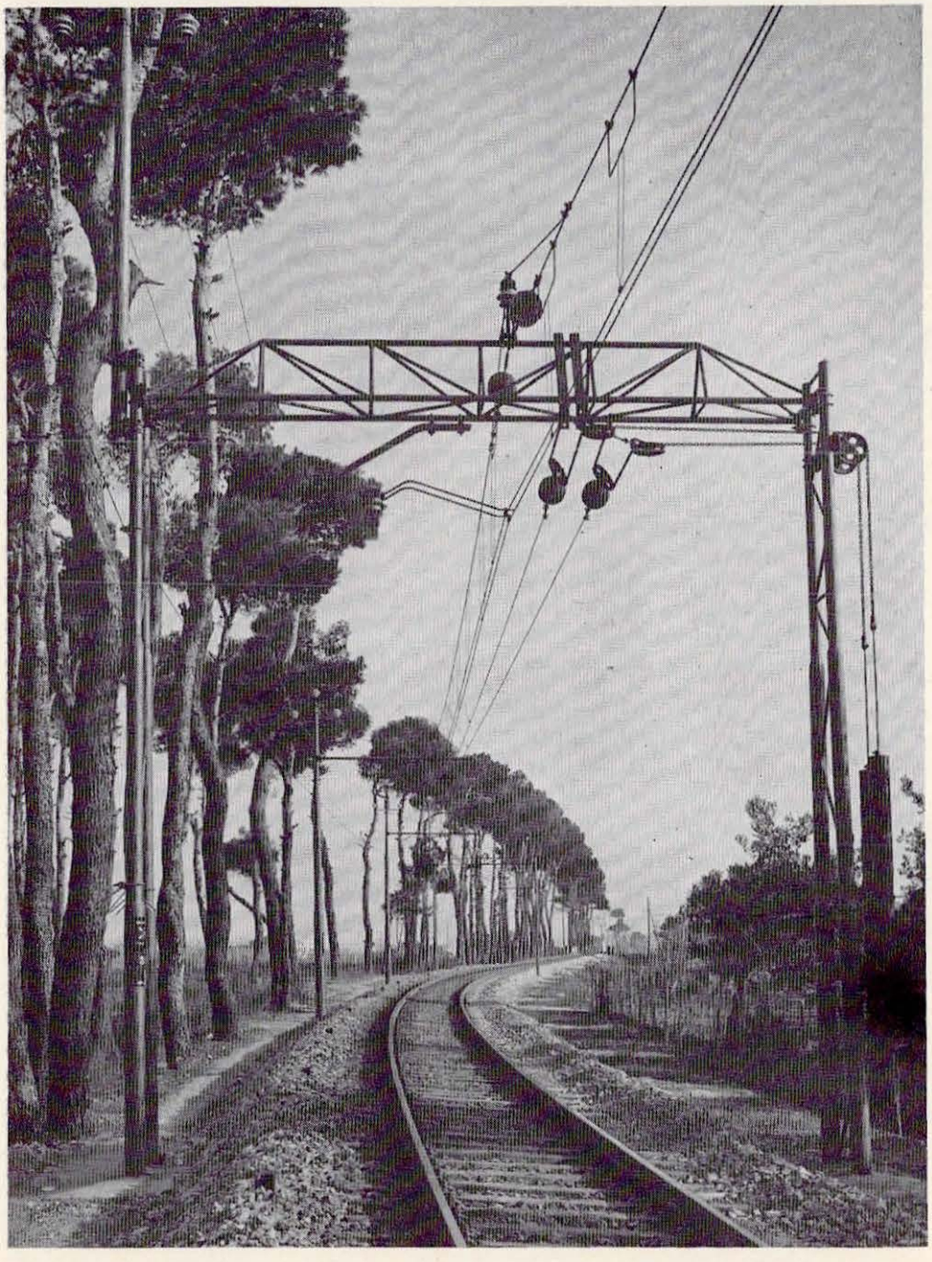
Half the nation's 10,000 route-miles of railway soon will be electrically operated. Rolling stock has been modernized since the war.

The Italian Railways are pushing forward their program of electrification which will soon put practically half of the system under electric operation.

Of a total route-mileage of just under 10,000 mi., over 4,000 mi. are already electrified. Upon completion of the projects now under way, another 1,000 electrified route-mi. will be added. Meantime, diesels are rapidly replacing steam on lines not scheduled to be electrified.

In contrast with American railways, the Italian railways are primarily passenger carriers. In the 1956-57 fiscal year they handled 384 million passengers—about 20% fewer than U. S. railroads carried in 1957. Meantime, however, their freight tonnage was only about 2 per cent of that of the U. S. railroads. Employees totaled 162,000 (or about 20% of the U. S. total).

There were in operation (1956-57) 2,504 steam locomotives, 1,606 electrics and 312 diesels (total units approximately 15% of those of the U. S. railroads). Passenger cars (including self-propelled units) added up to 12,000, or slightly less than one-third of the U. S. total. Freight cars—almost 120,000—were 7 per cent of those in service in the U. S.



WIRED FOR PROGRESS: Italy has already electrified 4,000 route-miles.

The Italian railways were in poor condition at the end of the war, but rehabilitation measures proceeded resolutely—so that service now provided is thoroughly modernized. Rates and fares are at a relatively low level. For example, because of inflation, the cost-of-living index has increased to 70 times that of pre-war, while passenger fares stand at only 35 times the pre-war level—indicating a relative cost of railway travel at approximately half that of pre-war.

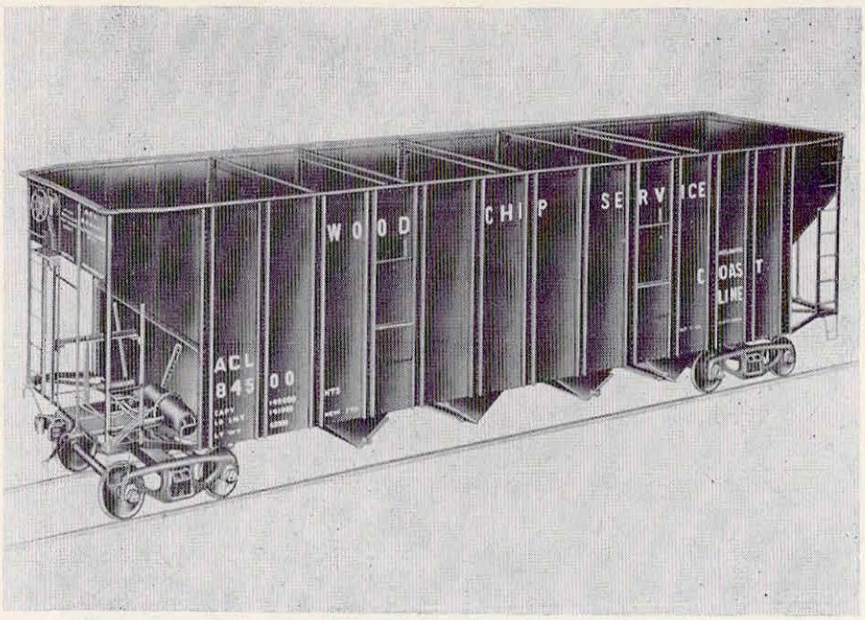
Practically all principal stations have been rebuilt. Track maintenance has been brought up to new high standards. There has, moreover, been considerable double-tracking of lines heretofore single-tracked. Rolling stock, freight as well as passenger, has been modernized—this including not only coaches, but dining and sleeping cars as well. Low-rated sleeping accommodations are provided for night runs.

The Italian State Railways are particularly proud of their popular "Settebello" train on the Milan-Rome (electrified) run; as well as their TEE trains (see RA, June 9, p. 16), which operate at high speeds over 300-400 mi. distances. A special feature of these trains is that customs inspection is made en route, obviating delays at border points. Ferry connections with Sicily have also been improved with new vessels.

Special effort has been made to get railroad tracks into industrial plants with inducements to shippers who make such arrangements.

Freight rolling stock has been greatly improved, not only by larger cars for bulk freight, but also by the provision of widespread service by containers—on which freight charges are levied only on the contents, not on the containers.

There is a lively appreciation in Italy of the fast developing "European Common Market"—and a determination by the railways to make their necessary contribution to that objective, by providing up-to-date railway transportation.



New Hopper: Perfect for Wood Chips

The Atlantic Coast Line is building 200 giant-sized open-top hopper cars specially designed for rail service to the pulp and paper industry. Months of tests have resulted in what is said to be the largest open-top wood-chip hopper car in the country. ACL's Waycross, Ga., Shops will begin to produce them late in January at a rate of 20-25 per month.

RRs Warned: Unify or Die

D&H officer deplores rail industry's lack of unity in meeting rate and service competition of truckers.

► **The Story at a Glance: An eastern railroad official threw out a ringing challenge last week:**

If the railroads can haul freight better and cheaper than their competitors, why don't they do it—instead of scrapping among themselves and letting the competition ride off with the cream of the traffic?

The reason, said J. P. Hiltz, D&H vice president—operation and maintenance, is that the railroads have so far refused to adopt a unified approach toward realistic rates, and service improvements.

It's a situation that could lead, he fears, to the destruction of the industry.

"In the railroad industry," Delaware & Hudson Vice President Hiltz told the New England Railroad Club, "we have all kinds of professional associations and other types of organizations which meet frequently to discuss mutual problems and arrive at common understandings. Yet even with these attempts at mutuality, we have yet to accomplish a unified approach to many of our common problems."

He cited these examples:

● "One railroad solicits all types of perishable freight and insists it makes money from handling it. Its connecting line does everything possible to discourage certain types of perishable commodities and will not join in the establishment of schedules which could bring this business to the service route . . .

● "One railroad feels that certain interline passenger service is profitable and would like to improve service and schedules. The connecting line is no longer interested in passenger service and despite the high train earnings of a particular run will not join in a program of improvement.

● "One road likes piggyback—the next one doesn't. One believes in furnishing the shipper special equipment in order to retain his business—the other says this is not an economical proposition. One swears by the 'cycle' method of track maintenance—his neighbor deplores its use. And so on, far, far into the night."

Mr. Hiltz went on to say:

"I am the first to admit that a certain amount of disagreement is desirable. I am the first to agree that certain railroads have conditions peculiar to their property or operation which cause them to have different outlooks on certain matters. I readily concede that varying objectives influence the type of approach to problems.

"However, I contend that none of these reasons, nor many others which could be advanced, can account for the lack of unity in the railroad industry. It can only be accounted for, in my opinion, by short-sightedness, stubbornness, and selfishness. It can only lead, and again in my opinion, to the eventual destruction of our industry . . .

"We have repeatedly claimed that we can haul freight more cheaply than any other form of land or air transportation. If we make this claim, why don't we make it our objective to do so instead of holding our rates so high that competition with higher operating costs is able to skim off the cream of our business by meeting our rates and at the same time providing better schedules and better service? . . . The trucks have an operating ratio of 97.5 per cent, in spite of the fact that they receive better than four times as much as the railroads do for hauling a ton of freight one mile.

"Why don't we make it our goal to drive this high-priced carrier out of the volume business? I am fully aware of the obstacles which the ICC has thrown in the path of doing so with their so-called 'umbrella' rate decisions. However, I don't believe the railroads as a whole have ever tried to establish rates on any basis except that of 'what the traffic will bear' and even then without any particular unity of effort. I am of the opinion that a unified approach toward realistic rate making will eliminate some of these governmental road blocks which have prevented our meeting competition.

"I feel that the real reason we don't effectively compete with the trucks is because we don't know how to compete, except among ourselves. As an example, just very recently service competition has been generated in a certain section of the country by a railroad which has adopted considerably improved schedules. Has this competition been generated between this railroad and the trucks? Unfortunately, the answer is no. It has been generated between that railroad and the railroads with which it competes.

"All of these roads have been forced to establish expensive, high-speed service, none of which can meet the truck schedule and all of which can only be dependable if all the breaks are with it.

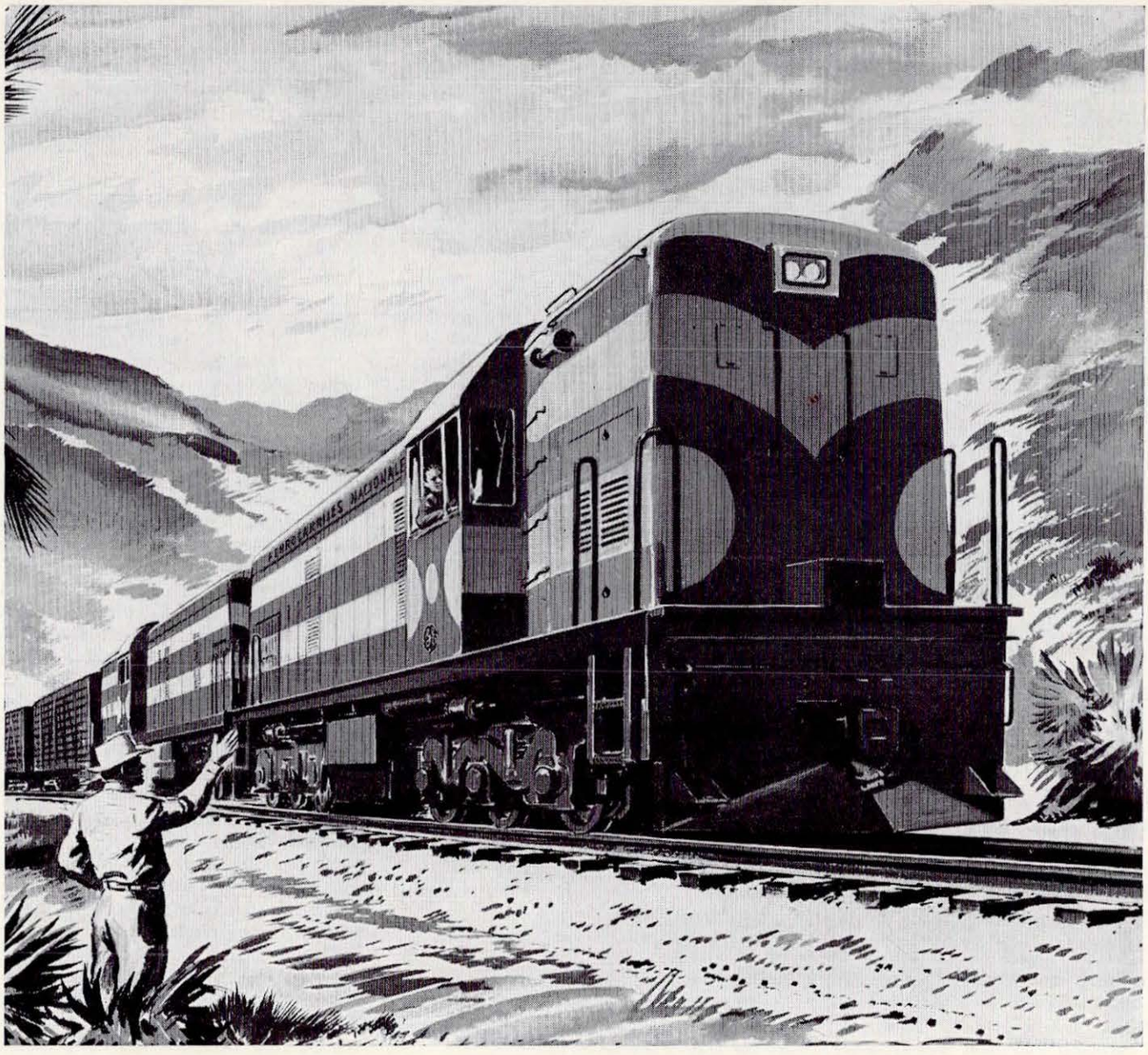
"I think it is about time that we admit that we cannot compete with truck speeds on either a short or long haul basis and still retain our economic advantage. This is not defeatism—it is realism. I also think that it is time that we realize that we can compete with them through a unified approach involving rates, dependability and special services."

As the basis for a realistic look at competition, Mr. Hiltz stressed these points:

● "We can carry freight cheaper than trucks or any other form of land or air transportation if we carry it in volume."

● "We can't compete with trucks on speed."

● "We must provide dependable service, and if we do, speed in most cases is not too important."



BENDIX FUEL INJECTION EQUIPMENT...

Speeds diesel-electric locomotives around the world!

General Electric, 65 years a major locomotive manufacturer, insists on the best of quality components for its diesel engines. Their new standard line of universal diesel-electric locomotives has been thoroughly proven in railroad use both in the United States and elsewhere throughout the world. And these modern locomotives, powered by Cooper-Bessemer diesel engines, utilize standard precision-built Bendix* fuel injection equipment for high fuel economy and dependability.

In areas from sea level to 14,700-foot altitudes, in temperatures ranging from 130°F to –65°F, in remote locations where dependability is absolutely necessary, Bendix injection equipment has operated at maximum efficiency to speed General Electric locomotives around the world.

There's no question about the choice of Bendix injection equipment for dependable, economical operation. That is why so many leading diesel manufacturers specify Bendix for their injection equipment requirements.

Scintilla Division of Bendix Aviation Corporation, Sidney N. Y. Export Sales and Service: Bendix International Division, 205 East 42nd Street, New York 17, N. Y.

*REG. TRADEMARK

Scintilla Division
SIDNEY, N. Y.

Bendix
AVIATION CORPORATION

NOW... IN THE BEST DIESEL RADIO...

POSITIVE* SURGE PROTECTION

*Transistors make the difference

TRANSISTORIZED 64 volt STAN-PAC RADIO

Now, full electronic power regulation in the new Stan-Pac radio gives you *absolute protection* from damage caused by surges arising in the locomotive power circuits. You get never-before-known reliability.

With Stan-Pac radio, a fully transistorized power supply replaces vibrators, converters, or expensive rotary machinery. This means lower installation costs and lower maintenance costs. And for higher reliability, the voltage regulator and audio circuits are also transistorized.

Get the full story now. Contact your Motorola Communications Representative or write today.

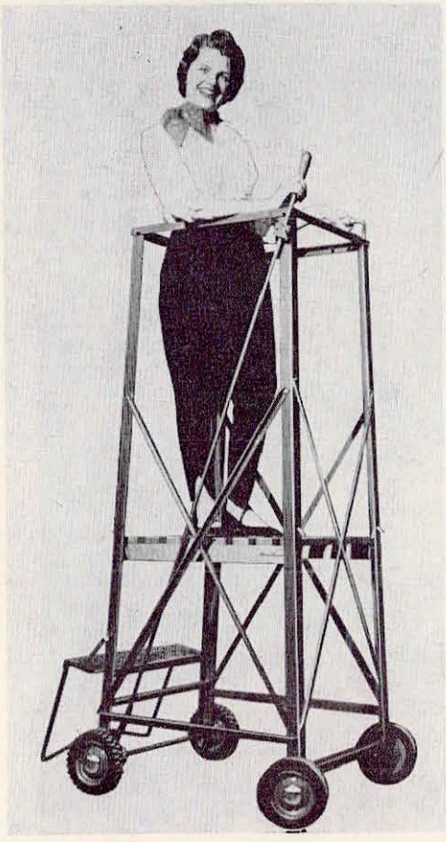
New Stan-Pac Radio also features

- **Improved Heat Dissipation Design** affords cool-running transistor and equipment operation under high ambient conditions.
- **Advanced Design Motorola Transistors** are used for utmost reliability.
- **Front Panel Metering** speeds service checks and maintenance operations.
- **One-Bolt Chassis Mounting** provides superior mechanical stability, yet cuts bench time on internal maintenance.

MOTOROLA RAILROAD RADIO

Motorola Communications & Electronics, Inc., 4501 Augusta Blvd., Chicago 51, Ill. • A Subsidiary of Motorola Inc.

New Products Report

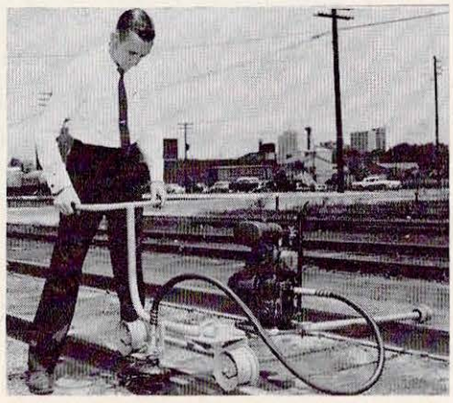


Self-Propelled Scaffolding

A self-propelled scaffolding on wheels, which can be moved while elevated, is said to save 25 per cent of a workman's time. It is propelled by a crank at the side of the guard rail. A steering handle permits forward or reverse movement, and a safety brake locks the unit in position while working. The scaffolding is of welded and bolted steel construction, and its wooden platform can be adjusted to one of seven positions up to 12 ft. high. *Castle Manufacturing, Inc., Dept. RA, 1701 Glenwood, Flint, Mich.*

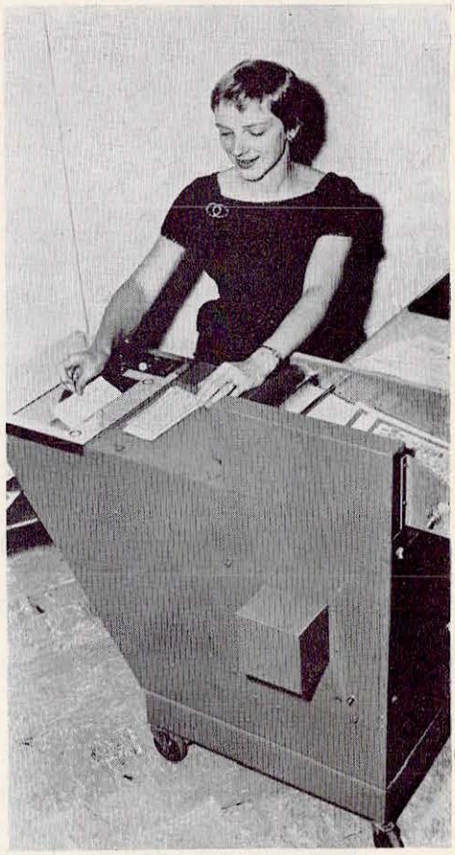
Teflon-Coated Cutout Cock Keys

The Teflon coating on the permanently lubricated keys of these improved cutout cocks is chemically inert and not subject to corrosion. It never dries or gets carried off through the system like conventional lubricants. Its relative softness and cold flow characteristics make the coating conform to slight irregularities which might cause leakage, maintaining sealing ability. Damage resulting from operation of sluggish valves is eliminated by much lower operating torque. *New York Air Brake Co., Dept. RA, 230 Park Ave., New York 17.*



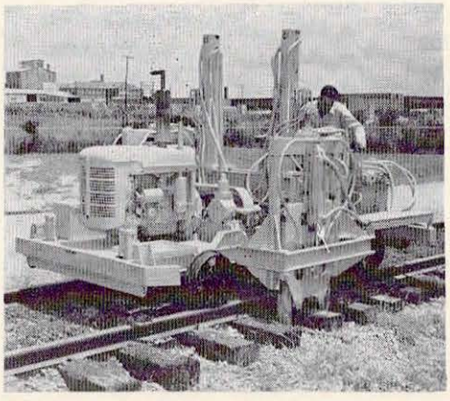
Rail Bond Grinder

With the model M300-A, grinding can be done by an operator standing at the machine, controlling the pressure of the wheel with a spring loaded handlebar attachment. This assures flat surfaces for the application of welded bond wires. Attachment for the wheel may be changed for grinding lipped rail. The carriage supports the 3.6-hp Kohler gas engine with attached 6-ft flexible shaft. The two flanged wheels have roller bearings. *Transport Products Corp., Dept. RA, 3008 Magazine St., Louisville 11, Ky.*



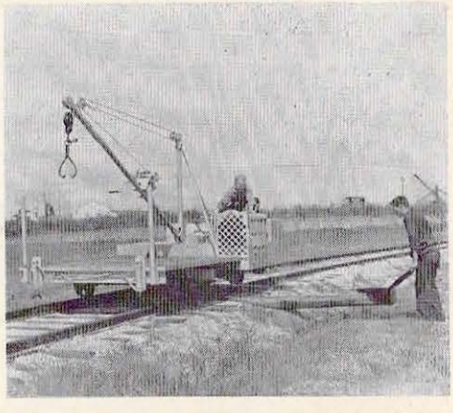
Portable Copying Camera

The Copy-Cart unit combines in a single cabinet a continuous-flow reducing camera and an automatic processor. No darkroom is needed; no water connection is required. Opaque originals up to 8½ in. wide may be copied. By factory adjustment the unit can be modified to provide any single reduction, from 50 to 80 per cent of linear size. Possible railroad application: copying of waybills and various other records. *Peerless Photo Products, Inc., Dept. RA, Shoreham, Long Island, N. Y.*



Super Jack-All and Track Crane

The Super Jack-All (left) with redesigned tamping heads and feet, has a tamping guide that now works vertically to give better compaction and spotting. The new model, equipped with an automatic tie finder, tamps on the side of ties with both vibration and compaction. It has satisfactorily raised track ahead of two production tampers. The Kershaw Track Crane (right) is equipped with a mechanism for inserting ties in track. The mechanism is built into the carriage of the crane. *Kershaw Mfg. Co., Dept. RA, Montgomery, Ala.*



a Merry Christmas and Prosperous New Year from the entire ASF family.....

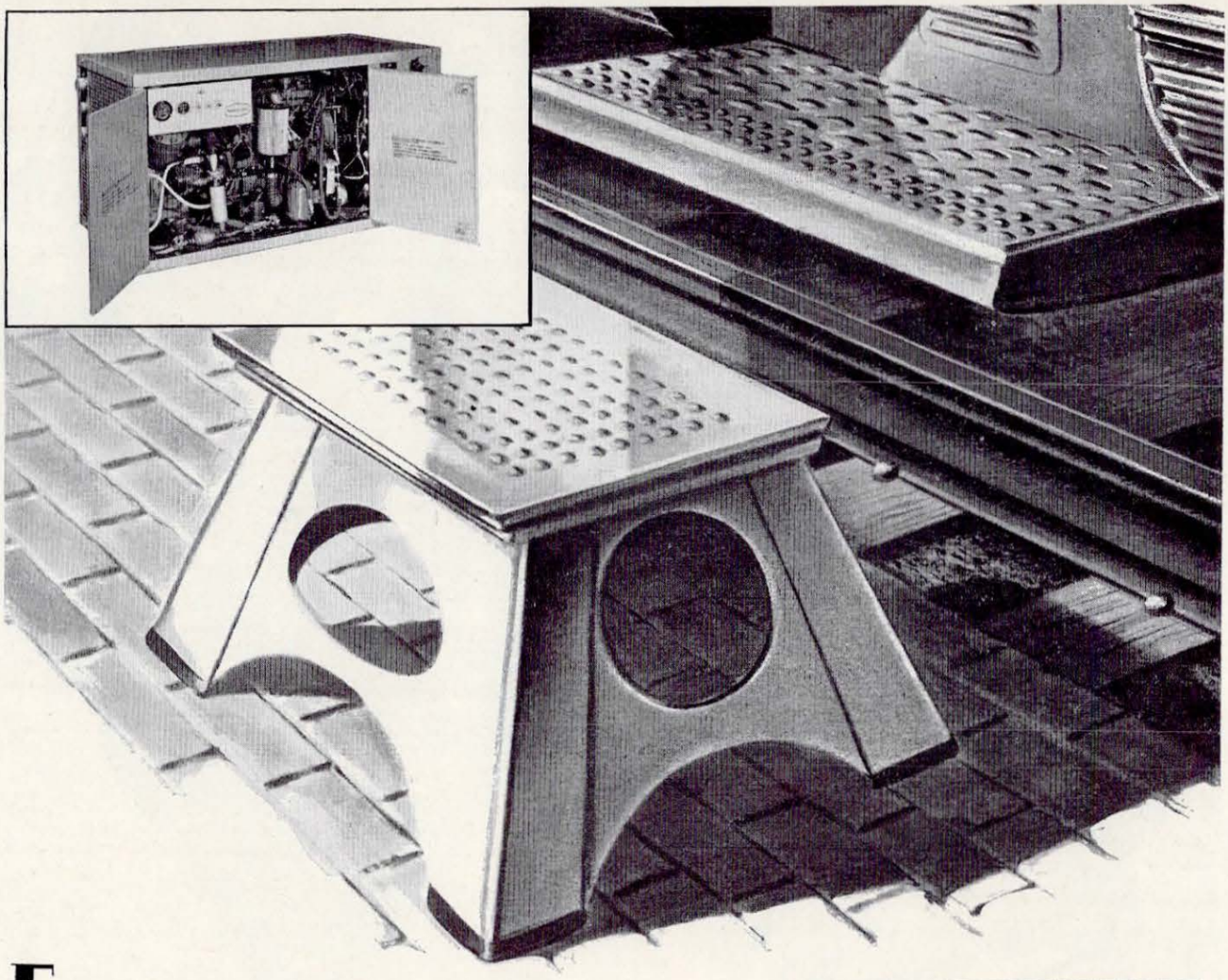
TRANSPORTATION EQUIPMENT DIVISION
HAMMOND DIVISION
ELMES AND KING DIVISION
DIAMOND CHAIN COMPANY, INC.
ASF
GRIFFIN WHEEL COMPANY
PIPE LINE SERVICE CORPORATION
AMERICAN STEEL FOUNDRIES INTERNATIONAL, S.A.
GRIFFIN STEEL FOUNDRIES, LTD.

AMERICAN STEEL FOUNDRIES

Prudential Plaza, Chicago 1, Illinois

PBI MEMBER

Mint mark of fine products



First-class treatment for Refrigerated TOFC....

TROPICAIRE Coldmobile

Face a fact: no cargo requires greater care, more coddling, than a load of perishable freight. That's why more and more lines are testing, proving and specifying TropicAire-Coldmobile refrigeration equipment for their TOFC fleets. There are a number of good reasons.

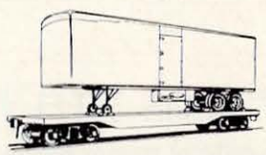
First, because TropicAire-Coldmobile units are more-than-ordinarily rugged . . . they're built to withstand the stresses of normal rail operations. TropicAire, in other words, is *tough*.

Further, TropicAire-Coldmobile equipment is available with diesel power. And diesel power means easier, more familiar maintenance, together with the added advantage of easily available fuel supplies.

As for performance, actual in-service records prove that TropicAire reefers can (and often do) remain in operation for hundreds of hours, with no maintenance other than refueling.

When your line is ready to equip the TOFC fleet, or when present refrigeration units need replacing, look to TropicAire-Coldmobile . . . it's *built* for the job.

"TropicAire" and "Coldmobile" are trademarks of McGraw-Edison Co., Chicago. Copyright 1958 by McGraw-Edison Co.



TROPICAIRE Coldmobile

MOBILE REFRIGERATION
AIR CONDITIONING

ANOTHER PRODUCT OF McGRAW EDISON

McGRAW EDISON COMPANY Tropic Aire Division 5201 W. 65th Street Chicago 38, Illinois

MARKET OUTLOOK *at a glance*

Carloadings Rise 10.3% Over Holiday Week

Loadings of revenue freight in the week ended Dec. 6 totaled 594,476 cars, the Association of American Railroads announced on Dec. 11. This was an increase of 55,285 cars, or 10.3%, compared with the previous holiday week; a decrease of 23,360 cars, or 3.8%, compared with the corresponding week last year; and a decrease of 143,775 cars, or 19.5%, compared with the equivalent 1956 week.

Loadings of revenue freight for the week ended Nov. 29 totaled 539,191 cars; the summary, compiled by the Car Service Division, AAR, follows:

REVENUE FREIGHT CAR LOADINGS
For the week ended Saturday, November 29

District	1958	1957	1956
Eastern	81,593	86,581	120,702
Allegheny	97,269	108,154	150,206
Pocahontas	47,449	48,347	65,260
Southern	103,623	99,898	131,740
Northwestern ..	56,907	59,206	100,676
Central Western .	108,139	109,622	129,050
Southwestern ..	44,211	41,914	54,512
Total Western Districts	209,257	210,742	284,238
Total All Roads	539,191	553,722	752,146
Commodities:			
Grain and grain products	44,968	51,444	51,053
Livestock	4,972	5,663	8,815
Coal	105,392	111,607	152,239
Coke	8,459	8,786	12,931
Forest Products .	33,004	29,329	44,373
Ore	20,005	20,325	50,147
Merchandise l.c.l.	37,633	42,980	57,229
Miscellaneous ..	284,758	283,588	375,359
November 29 ..	539,191	553,722	752,146
November 22 ..	619,350	632,763	650,620
November 15 ..	643,795	647,297	763,898
November 8 ..	658,086	675,579	772,850
November 1 ..	674,477	713,994	800,367
Cumulative total, 48 weeks	28,020,306	33,279,260	35,203,955

PIGGYBACK CARLOADINGS.—U. S. piggyback loadings for the week ended Nov. 29 totaled 5,332 cars, compared with 4,123 for the corresponding 1957 week. Loadings for 1958 up to Nov. 29 totaled 253,770 cars, compared with 232,566 for the corresponding period of 1957.

IN CANADA.—Carloadings for the seven-day period ended November 21 totaled 76,272 cars, compared with 73,023 cars for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
November 21, 1958	76,272	27,483
November 21, 1957	76,926	29,221
Cumulative Totals:		
November 21, 1958	3,406,200	1,258,287
November 21, 1957	3,666,667	1,466,367

New Equipment

LOCOMOTIVES

► *Burlington.*—Will buy in 1959 37 diesel-electric locomotives from Electro-Motive Division of General Motors as part of $23 million equipment program. Sixteen units will be 2,400-hp SD-24's; 12 will be 1,750-hp road-switchers; and 9 will be 1,200-hp switching units. Delivery is expected by the end of May. The 1,750-hp and 1,200-hp locomotives are slated for service on Burlington's subsidiaries, Colorado & Southern and Fort Worth & Denver.

► *Nickel Plate.*—Will purchase 35 diesel-electric road switchers, 20 1,750-hp units from Electro-Motive Division of General Motors and 15 1,800-hp units from Alco Products, Inc. Total estimated cost: $6,168,815. Deliveries are scheduled for first quarter 1959.

► *Santa Fe.*—Will purchase 42 2,400-hp diesel-electric locomotives, 30 SD-24 turbosupercharged units from Electro-Motive Division of General Motors and 12 DL600B units from Alco Products, Inc. Deliveries are scheduled for second quarter 1959.

FREIGHT-TRAIN CARS

► *Burlington.*—Will acquire 1,500 freight cars in 1959 as part of its $23 million equipment program. Coming from company shops: 600 40-ft 6-in. 50-ton box cars with nailable steel floors and 14-ft combination sliding and plug doors; 100 70-ton insulated DF-equipped box cars for Burlington Refrigerator Express; 500 70-ton hopper cars; 100 70-ton bulkhead gondolas with removable sectional roofs; 50 50-ton bulkhead flats; and 30 radio-equipped steel cabooses. General American will build 20 Airslide hoppers and 100 3,500-cu ft capacity covered hoppers. Burlington will add 200 men to its Havelock (Neb.) shop force when new car production begins.

► *Chesapeake & Ohio.*—Ordered 50 50-ft, 50-ton box cars from Pullman-Standard for delivery this month. Total cost: $584,750. Cost includes $2,795 per car for Quick Loader lining.

► *Chicago & Eastern Illinois.*—Ordered 750 70-ton hopper cars from American Car & Foundry Division of ACF Industries, Inc., for delivery in the first quarter 1959. Cost: approximately $6,750,000.

► *Chicago & North Western.*—Ordered 50 70-ton covered hopper cars from American Car & Foundry Division of ACF Industries, Inc. Delivery is scheduled for early 1959.

► *Clinchfield.*—Ordered 100 70-ton open-top hopper cars from American Car & Foundry Division, ACF Industries, Inc., at a cost of approximately $910,000. Delivery will be made in March 1959.

► *Pittsburgh & Lake Erie.*—Ordered Flexi-Van equipment costing $1,161,000 from Strick Trailers, a division of Fruehauf. Order includes 25 double-unit flatcars, 100 Flexi-Vans, and 50 highway wheel assemblies.

► *Santa Fe.*—Will build 500 50-ft 6-in. box cars at company shops at Topeka, Kan. Cars will be equipped with DF devices, shock-control underframes, roller bearings and nailable steel flooring. Two hundred cars will be insulated. The road will also order 100 70-ton covered hopper cars (3,000 cu ft capacity minimum) from outside carbuilders.

a RAILWAY AGE time-saver page

Will '59 Bring Commuter Answer?

On the commuter question, 1958 has been a year of unlimited debate—and some scattered action. But now commuter lines want something done.

► **The Story at a Glance: New York commuters, who have been in the headlines regularly all year, hit the spotlight again last week when the DL&W announced it planned to ask permission to drop suburban service. Reason: high N.J. taxes on top of operating difficulties of service. The 1958 Transportation Act giving ICC jurisdiction will be the basis of action. Meanwhile, another abandonment case under the Act was stayed indefinitely for Supreme Court review. NYC will continue to operate its Hudson River ferries.**

As 1958 draws to a close, there are signs that 1959 will be the year of decision for commuters. Biggest sign yet was an announcement by Lackawanna President P. M. Shoemaker that plans to stop all suburban passenger service "are far advanced and our initial moves in that direction are scheduled for the late spring of 1959."

Faced with a working capital deficit and in the absence of action by the state, the Lackawanna has no alternative, Mr. Shoemaker said. "For seven years now," he added, "we have been endeavoring to call the public's attention, through the press, to our precarious situation . . . The day of reckoning is here and the patient is too sick for a small dose of compromise."

The only alternative to abandonment, Mr. Shoemaker said, would be relief from all taxes upon transportation property, freight as well as passenger. "Only then will our property approach parity with highways and airports, which serve both our freight and passenger competition," he added.

The Lackawanna's 27,000 daily passengers make it the largest commuter road in New Jersey. Taken together, taxes and suburban passenger losses excluding taxes cost the line about $5.5 million per year. Almost half of this ($2,500,000) goes to pay taxes in Hudson County, including Jersey City and Hoboken.

The Lackawanna's cash and equivalent assets at the end of 1957 were 78 per cent lower than in 1948. In a letter to commuters explaining the road's stand, Mr. Shoemaker predicted a deficit approaching $4,000,000 for 1958.

THE N. J. PUC has stated that it will fight the attempt at abandonment. The PUC contends that it has jurisdiction in such matters, not the ICC. And Governor Robert Meyner told a press conference that the transit problem had reached the point where help would have to come from the federal government. He pointed out that metropolitan areas were already being pinched by inadequate tax revenue and would be unable to give the railroads the relief they need. (New Jersey railroads have asked for tax relief before, without getting it.)

New Jersey's Sen. Case, meanwhile urged the federal government to begin an immediate investigation into how to prevent the destruction of railroad passenger service.

A bill pending in the New Jersey Assembly establishing a metropolitan transit district as an independent bi-state authority died last week when the Assembly adjourned. The bill, which had been passed by the New Jersey Senate and both houses of New York's legislature, had been waiting action for several months. There are indications that the bill will be brought up again when the N. J. legislature reconvenes January 13.

In the meantime, Lackawanna's patrons showed concern, tempered by a general feeling that the line would be unable to carry out its threat. The recent decision of a three-judge Federal Court considering New York Central's request to abandon Hudson River ferry service partly supported, partly repudiated the optimistic view most commuters were taking.

This court decision upheld the constitutionality of the 1958 Transportation Act (RA, Dec. 1, p. 7). Under it, the New York Central was told that it could discontinue its Hudson River ferries, under authority of an ICC order permitting the move, but that the railroad would have to continue operating the ferries until the case could be reviewed by the Supreme Court. In effect, the court confirmed the Central's right to discontinue the ferries as of last August, but told it to go on operating the ferries till further notice.

The Erie, which was a partner in the ferry case, has discontinued its one remaining ferry as of Dec. 14. Simultaneously, the few Erie passenger trains that were not already using the DL&W station at Hoboken have been rescheduled to terminate at Hoboken. There, Erie riders can get Lackawanna ferries, at least temporarily.

Outside New Jersey, there were other places with the same problem, some of which seemed to have solutions. Chicago and North Western Board Chairman Ben

Pan Am Congress Inducts Loomis, Freas

Daniel P. Loomis, president of the Association of American Railroads, left, and Howard G. Freas, chairman of the Interstate Commerce Commission. center, receive certificates of membership in the U. S. National Commission of the Pan American Railway Congress Association. The documents were presented at a luncheon meeting in Washington by H. Charles Spruks, special assistant to the chief of protocol of the Department of State, right. Mr. Spruks also administered the oath of office to Messrs. Loomis and Freas.

Heineman was quoted last week in a weekly newsmagazine as telling the public that it is possible to make money on short-haul commuter service that is fast, comfortable and reliable. Modern equipment and modern methods plus fares that apportion the cost equitably and eliminate most of the irregular close-in commuters are the bases of the plan the magazine ascribed to Mr. Heineman.

In New York, New Haven President George Alpert is looking for help from another source. His line already has a high percentage of new equipment. Schedules are good, and there is no close-in business to drop. Still, the New Haven loses $3.8 million a year carrying commuters and suburban passengers to New York. Mr. Alpert wants New York City and Westchester County (N.Y.) and Fairfield County (Conn.) to pay half of the losses until a permanent solution can be found (RA, Dec. 1, p. 40).

In Boston, where Mr. Alpert won a $900,000 indemnity for continuing Old Colony commuter service for a year, the New Year is likely to bring the first proposals for a permanent solution to the Old Colony problem.

In the meantime, the Boston & Maine has asked permission to end three lightly patronized suburban lines out of Boston. The proposed cut, with other service reductions, would eliminate 78 trains.

RRs Seek Gains

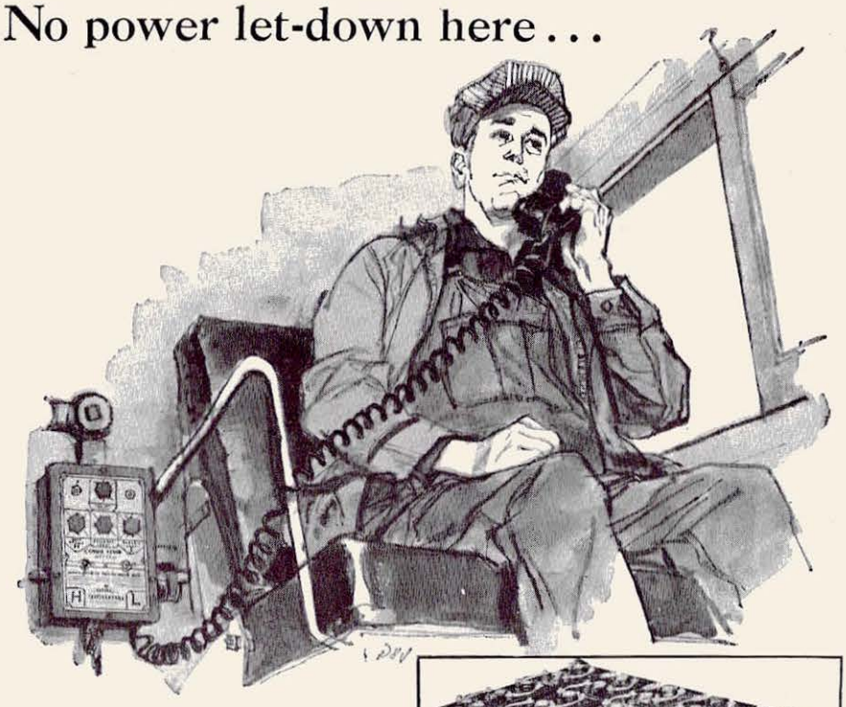
(Continued from page 10)

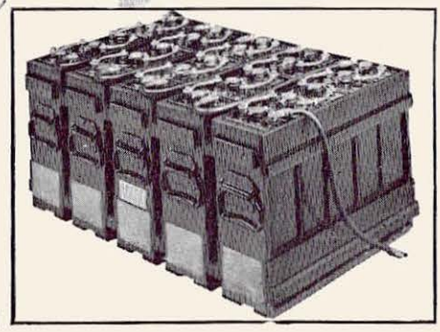
to the move last week by placing orders for new high-horsepower locomotives. Santa Fe is buying 30 2,400-hp General Motors SD-24's and 12 2,400 hp Alco Products DL600B's; Burlington will take 16 SD-24's. C&NW and Milwaukee are figuring on handling expedited train movements with existing power—four units on a 75-to-100-car train.)

This flurry of schedule activity has done two things—made deliveries competitive with the fastest truck service and created new competition among the railroads themselves. Sleeper-cab trucks (and a stop for only one crew change) have made possible fourth-morning delivery on LTL to the Coast; truck-load freight can be delivered third-afternoon. Now the railroads are competing, service-wise, with the 60-hour schedules daily and the third-evening scheduled tri-weekly (four days per week in Rock Island's case). In addition, Rock Island and Burlington have shortened Chicago-Denver schedules in line with the Coast speedup.

Actually, the fastest schedules in effect now represent almost a 50 per cent reduction in time from schedules in effect in January. Normal scheduling then called for sixth-morning delivery. The cut to fifth-morning came in February—now schedules are down to fourth-morning and in some cases third-afternoon delivery.

No power let-down here . . .





. . . because there's power to spare here

Power to spare when you need it most. That's the reputation that has made Edison storage batteries first choice on railroads throughout the country

Now—in the fiftieth anniversary year of the Edison nickel-iron-alkaline battery—Edison batteries offer brand-new dependability and longer life thanks to a new active material developed to meet the increasing demand of today's lighting, air-conditioning, and communications systems. This new material—on long-term test—has shown it can provide new durability and economy over the full range of passenger-car and caboose operating conditions.

For information on Edison storage batteries, contact your local Edison representative or write Edison Storage Battery Division, Thomas A. Edison Industries, West Orange, N. J. In Canada: International Equipment Co., 90 Bates Road, Montreal, P. Q.

50th Anniversary
EDISON Nickel-Iron-Alkaline STORAGE BATTERY
1908-1958

Celebrating 50 years of progress, production, and continuing research . . . a background that brings you the world's longest lived, most dependable storage battery—*the battery that's built with tomorrow in mind.*

Edison NICKEL—IRON —ALKALINE Storage Batteries

. . . a product of Thomas A. Edison Industries of McGRAW EDISON

People in the News

ANN ARBOR—MANISTIQUE & LAKE SUPERIOR.—Effective Jan. 1, 1959, the accounting and treasury departments of these roads will be transferred from Toledo, Ohio, to the general offices of the **Wabash,** Railway Exchange Building, St. Louis 1, Mo.

BESSEMER & LAKE ERIE.—Title of **S. O. Rentschler,** superintendent motive power, Greenville, Pa., changed to chief mechanical officer. Title of **D. L. Stanley,** assistant superintendent motive power, Greenville, changed to superintendent, locomotive department.

Edward E. Van Schaick, formerly with the railway sales and service department, appointed eastern freight agent, representing the company in eastern New York, eastern Pennsylvania, New Jersey and New England.

BURLINGTON.—**Werner F. Bokelman,** office manager in the auditor of expenditures department, Chicago, promoted to assistant auditor, succeeding **C. H. Ormsby,** retired.

CANADIAN NATIONAL.—**C. E. Shaver,** superintendent, Toronto terminals, appointed superintendent, Hornepayne (Ont.) division, succeeding **E. P. Burns,** transferred to the Stratford (Ont.) division, replacing **F. E. Carlin,** Mr. Carlin named labor relations officer, Toronto. **Kenneth W. Sewell,** secretary to vice president, appointed personnel assistant, Winnipeg, Man.

J. W. Reid, industrial representative, western region, appointed industrial agent, Manitoba and Saskatchewan districts, Winnipeg.

Raymond J. Hickey, diesel supervisor, Atlantic region, Moncton, N.B., appointed supervisor of diesel equipment for that region, succeeding **Blair E. Bayne,** retired. **Roy Randall,** regional supervisor, department of road transport, Toronto, Ont., appointed general supervisor of mechanical maintenance, department of transport, Montreal, Que.

James C. K. Norton has been named to the newly created position of supervisor of cartage services, Atlantic region. **Claude E. Flannery,** assistant accountant, road transport department, appointed accountant.

W. C. Moir, district passenger agent, Halifax, N.S., retires Dec. 31.

J. N. Easton, assistant superintendent, St. Lawrence division, Montreal, appointed superintendent transportation, Montreal district, succeeding the late **J. H. Wood.**

CHESAPEAKE & OHIO.—**Raymond J. Dullard, Jr.,** auditor of freight accounts, Richmond, Va., appointed auditor of revenues there. **John A. Virtue,** auditor of freight accounts—Northern region, Detroit, Mich., succeeds Mr. Dullard.

E. R. Kegelmeyer, regional general storekeeper, Huntington, W. Va., appointed general storekeeper—system at that point, succeeding **F. G. Hawes** who retired Nov. 30. **R. R. Reynolds,** assistant general storekeeper—system—standards, Huntington, appointed regional general storekeeper, Grand Rapids, Mich., succeeding **J. A. Bawsel,** transferred to Huntington. **R. H. Cobb** named assistant manager of stores—methods, Huntington, succeeding **J. D. McGann,** who replaces Mr. Reynolds.

E. S. Nunnery appointed trainmaster, Buffalo, N.Y.

COTTON BELT.—**F. R. Gammill, Jr.,** general agent, Nashville, Tenn., transferred to Louisville, Ky., succeeding **J. J. Waggener,** retired.

GREAT NORTHERN.—**Robert W. Greenman,** general agent-passenger department, St. Paul, transferred to Minneapolis, to succeed **Kent C. Van Wyck,** named general passenger agent, St. Paul. **Emmett M. Brady,** traveling freight agent, St. Louis, succeeds Mr. Greenman.

GULF, COLORADO & SANTA FE.—Jurisdiction of **R. O. Nutt,** district engineer, Galveston, Tex., extended to include the duties of the division engineer, Gulf division, replacing **T. D. Mason,** transferred.

INTERSTATE COMMERCE COMMISSION.—**Wendell Y. Blanning,** director, Bureau of Motor Carriers, retired Nov. 30.

LEHIGH & NEW ENGLAND.—**Henry L. Albert,** vice president—traffic, Bethlehem, Pa., retires Dec. 31.

MILWAUKEE.—**R. A. Kolhoff,** traveling freight agent, Minneapolis, appointed division freight and passenger agent, Dubuque, Iowa, to succeed **R. E. Beauvais,** who retired Dec. 1.

NICKEL PLATE.—**John E. Kloss,** assistant to chief mechanical officer, Cleveland, appointed master mechanic, Wheeling & Lake Erie district, Brewster, Ohio, succeeding **J. O. Hill,** retired. **A. C. Robinson,** general diesel foreman, Brewster, named assistant master mechanic, W&LE district. **R. J. Snyder,** assistant master mechanic, Brewster, appointed district superintendent, car department at that point. **R. P. Ruof,** diesel maintenance foreman, named general diesel foreman.

PENNSYLVANIA.—**William L. Thigpen,** master mechanic, Cincinnati, appointed master mechanic, Cleveland, to succeed **Wilford H. Long,** transferred to Columbus, Ohio. **John W. Jackson,** assistant master mechanic, Harrisburg, Pa., named master mechanic, Canton, Ohio, succeeding **J. K. Sherwood,** transferred to Buffalo, N.Y.

PULLMAN COMPANY.—**W. M. Flerlage,** general auditor, retired Nov. 30, and that position abolished. Communications heretofore addressed to general auditor should be directed to **T. E. Specht,** assistant comptroller.

ROCK ISLAND.—**H. B. Christianson,** assistant chief engineer, Chicago, appointed assistant to the operating vice president there, to succeed **Oscar R. Swanson,** who retired Dec. 1. Mr. Swanson also retired from his position as vice president of the Rock Island Motor Transit Company.

SANTA FE.—**J. A. Noble,** chief engineer, Amarillo, Tex., retired Nov. 30.

SOUTHERN PACIFIC.—**L. W. Garrison,** assistant superintendent, San Joaquin division, Bakersfield, Cal., transferred to the Rio Grande division, El Paso, Tex., to replace **R. B. Gibson,** deceased. **W. C. Morris,** assistant superintendent, Los Angeles division, Los Angeles, succeeds Mr. Garrison, and in turn is replaced by **A. D. DeMoss.**

C. C. Cather, research supervisor in the accounting department, San Francisco, advanced to assistant methods and research officer in the office of the vice president and general auditor. **John M. DeMartini,** research assistant in the accounting department, named supervisor-systems and methods.

Russell E. Frame, senior assistant division engineer, Los Angeles, appointed division engineer, Ogden, Utah. **O. G. Linde,** division engineer, Northwestern Pacific, succeeds Mr. Frame.

Clarence H. Grant, general superintendent of transportation, San Francisco, retired Nov. 30 after more than 37 years' service.

Frank J. Dowd, communications traffic supervisor, San Francisco, appointed assistant to superintendent of communications.

R. E. Mello, assistant manager of personnel, San Francisco, retired Nov. 30.

Walter M. Holmes, Jr., assistant to the passenger traffic and public relations manager, Chicago, promoted to assistant to the general traffic manager there.

OBITUARY

David Porter Bibb, 64, assistant valuation engineer for the **Louisville & Nashville,** died Dec. 3 in Louisville, Ky.

Chester C. Kratky, 58, secretary and treasurer, **Frisco,** St. Louis, died Dec. 4.

Supply Trade

Bruce Elmblad and **Robert J. Enroth** have joined the sales staff of the **Whiting Corporation** at district offices in New York and Chicago, respectively.

The Budd Company has announced the creation of **Bufra** (Budd/France), a new subsidiary at 10 Avenue de la Grande Armee, Paris 17, France. **M. Georges Le Horgne** is general manager. Bufra will market in Western Europe a line of testing processes and machines being developed and produced by Tatnall Measuring Systems Company, also a Budd subsidiary.

Central Equipment Company, a new railway and industrial supply company, has been formed. The four partners are **E. K. Goldschmidt, K. T. Benninger, G. C. Beck** and **H. C. Corbin.** Mr. Goldschmidt, manager, Central district, Safety Industries, has been elected president of the new company, which will represent Safety Industries, Inc., in the midwest, K. W. Battery Company on certain railroads, Pan Electric Division of Chandeysson of St. Louis, Mo., and others in both industrial and railroad industries. Messrs. Benninger and Beck were formerly with Safety Industries and Mr. Corbin was director of public relations for the Vapor Heating Corporation.

E. K. Goldschmidt

Norman E. Bateson

The **Grip Nut Company,** South Whitley, Ind., has appointed **Richard R. Swanson** as executive vice president. Mr. Swanson was formerly a vice president in the railroad and lock nut sales division.

NICAD Division of **Gould-National Batteries, Inc.,** Easthampton, Mass., has announced the appointment of **Fayette C. Anderson** to their engineering staff. Mr. Anderson was formerly chief engineer for the Storage Battery Division of Thomas A. Edison Industries.

George Costello has joined **Servo Corporation of America,** New Hyde Park, L.I., N.Y., as sales engineer in the government contracts department. Mr. Costello was formerly New York district sales manager for Vickers Electric Products Division of Sperry Rand.

Norman E. Bateson, deputy director of the research department, **Pullman-Standard Car Manufacturing Company,** Hammond, Ind., has been appointed director of research and development, to succeed **O. C. Maier,** who resigned Dec. 1.

Technology Paces RR Progress

New materials for building and maintaining rolling stock components, and techniques which permit faster analysis of tough maintenance problems were the subjects of technical sessions held by the Railroad Division, American Society of Mechanical Engineers, last week.

Additive car oils, glass banding for traction motors, and a carbon-grade steel with better cold weather characteristics for car castings were discussed at the New York meetings. Radioactive methods for determining diesel engine wear and methods for evaluating filter efficiency were also discussion topics.

Automation of train operation—utilizing new techniques such as punched-tape programming—was one of the engineering challenges issued by Glen B. Warren, ASME president, at the annual Railroad Division luncheon. He called attention to the electric utility industry, and said that the unmanned and completely automatic central power station is no longer a theoretical concept.

Utilization of all the latest technological developments, Mr. Warren said, would convince government and the public that the railroads are worthy of the subsidy which the principal speaker, New Haven President George Alpert, had just said they must have.

Mr. Warren told the group that the Engineers Joint Council, a coordinating body for the national engineering societies, stands ready to make engineering recommendations to assist in the development of a national transportation policy and possibly a national urban transit policy as well.

These points were made at the technical session:

• A foundry material popular in Europe, low-carbon intermediate-manganese steel, has been shown to be a solution to the cold weather problem of "brittle fracture." A recent study of railroad component failures performed by the Manufacturing Research Laboratory of American Steel Foundries "indicated that truck members can fail by the brittle failure phenomenon, and offered evidence to suggest a modified steel composition which would reduce the likelihood of such failure." The steel is generally equivalent to AAR grade B except that the manganese content is increased from a maximum of 0.0 per cent to a maximum of 1.20 per cent.

• Worn-in journal bearings perform satisfactorily with an adequate supply of straight mineral oil, work by the Research and Development Department of the Texas Co. has shown. Actual operating experience shows these ideal operating conditions do not always exist. Oil starvation, abnormal unit loads, or low oil viscosity frequently set up "boundary" lubrication conditions which result in hot boxes. Under these conditions, "straight mineral oils have been demonstrated both in the laboratory and in actual service to be inadequate," according to R. F. Meeker and D. C. McGahey of Texaco's Technical Services Division.

"While it is recognized that many bearing failures are due to causes beyond the realm of prevention by lubrication quality, it is entirely reasonable to conclude that heavy-duty oils . . . can and do prevent an appreciable percentage of marginal conditions from progressing to expensive hot boxes . . . Seasonal grades of car oil are recommended for free oiling to compensate for increased oil viscosity and reduced wicking rates at low winter temperatures."

M. A. Pinney, engineer of tests, Pennsylvania, recommended that additive type oils be used for saturating new packing and pads to protect new journal bearings during break-in. He agreed with the recommendations for changes in viscosity of oil applied to journal boxes in different seasons, but urged that such "free oiling" begin well in advance of the season for which the particular oil grade is designed.

The SP reported on techniques in use to analyze diesel engine wear.

The ideal Christmas gift

RAILROADS OF THE HOUR

By S. KIP FARRINGTON, JR.

The new, up-to-date railroad book for readers of the railroad bible—*Railway Age*—RAILROADS OF THE HOUR by America's railroad expert. New trains, yards, radio, piggyback—all under one cover. Introduction by Vice President Richard M. Nixon. 160 photographs. At all bookstores. $8.50

Coward-McCann
New York 16, N. Y.

Oakite warehousing cuts your inventory

Keep the bulk of your cleaning compounds inventory off your property – save on handling, deadheading, reshipment and inventory charges. How? Oakite Warehouse Service.

Fifty-seven warehouses on right-of-way across the country put a full supply of Oakite materials as close as your phone, but off your yard – off your books! No need to to buy large lots. A 25 barrel order brings cost close to carload price. Ask your local Oakite man to tell you more. Or, write Oakite Products, Inc., 46 Rector St., N.Y. 6, N.Y.

SPECIALIZED INDUSTRIAL CLEANING
OAKITE
MATERIALS · METHODS · SERVICE
SCIENCE
In our 50th year

Export Division Cable Address: Oakite

Technical Service Representatives in Principal Cities of U. S. and Canada

You Ought To Know...

Great Northern will move into 1959 "without deferred maintenance of track, equipment and other transportation facilities," President John M. Budd reported last week. Moreover, GN will wind up this year with net income "close to that of 1957." Net for the past four months has been larger than for the comparable period in 1957, has approximated levels reached in 1956.

New Undersecretary of Commerce for Transportation will be John J. Allen, Jr., if he is confirmed by the Senate. The White House has announced that President Eisenhower will appoint Mr. Allen, a congressman from California who failed at reelection last month. The post has been vacant since Oct. 24, when Louis S. Rothschild resigned. Mr. Allen has been a member of the House Committee on Merchant Marine and Fisheries.

Union Pacific has "turned its back on railroad passenger defeatists" with inauguration of a new service and expansion of a passenger equipment order. It's the strongest pro-passenger statement yet from a road noted for passenger optimism. UP's new moves include a new through Pullman room service between Portland, Ore., and Los Angeles and the addition of five coaches to a 30-car order (RA, Dec. 8, p. 37). The road also said it's now taking delivery on new dome coaches (five for UP, one for Wabash) for the "City of St. Louis."

Passenger service abandonment proposal of the Lehigh Valley is now before the ICC. The road submitted a comprehensive presentation in support of its plan to make the abandonment notice effective Jan. 12, 1959, and thus drop a business it has been conducting for approximately 100 years. The road says that losses have reached "proportions so huge as to endanger the solvency of the company and impair its ability to maintain its property."

The bulk of more than 6 billion Christmas cards and packages will move by rail this year, according to the AAR. To carry the Christmas pack, railroads will make available to the Post Office Department the equivalent of more than 62,000 standard-size mail cars.

► As in the past, railroads are handling most of this year's crop of 40,000,000 Christmas trees. The "tree of trees," a 75-foot spruce cut near Libby, Mont., was delivered to the White House in Washington last week.

Construction has started on the Atlantic Coast Line's new, 17-story office building in Jacksonville, Fla. The $10,000,000 structure, which the ACL will use as a general headquarters, is scheduled for completion in the early summer of 1960.

Piggyback flatcars will be moving rail freight coast-to-coast in 48 hours "within five to 10 years," Morris Forgash, president of U. S. Freight Co., predicted in Los Angeles. He also predicted that the addition of piggyback cars to passenger trains will wipe out the deficit on major passenger runs.

► In New York, the president of another major freight forwarder—T. R. Bartels of Republic Carloading & Distributing Co.—said "the freight forwarder is the logical agency to make the fullest, most efficient use of trailer-on-flatcar service." He predicted that piggyback savings (resulting from reduced terminal expenses will permit forwarders to "hold the line" on rates.

Tank cars without side running boards will not be permitted under ICC safety rules if the Commission accepts the advice of Examiner Vinskey. The examiner has recommended, in a proposed report, that the Commission deny Union Tank Car Co.'s petition for clearance of such cars. The proposal is opposed by the Railway Labor Executives Association.

A 20 per cent boost in Chicago commuter fares, estimated to provide about $375,000 annually in additional revenue, is being sought by the Rock Island. Hearings will begin in February. Rock Island's last fare increase went into effect last February.

The Iowa Commerce Commission is convinced that Chicago & North Western's central agency plan "is fulfilling the needs of the shippers at all of the stations involved in the program." As a result, C&NW will be permitted to remove the depot from all its "associate" stations—the former one-man agency stations now served by an agent based at a central point.

A linkup between the Pacific Great Eastern and Northern Alberta Railways is expected soon. The roads now are separated by some 700 feet of uncompleted line at Dawson Creek, B. C. When the companies reach agreement on details, the Board of Transport Commissioners will be asked to approve the connection.

A financial study of the proposed Erie-D&H-Lackawanna merger has been completed by the First Boston Corp. It follows an economic report completed earlier this year. The three carriers will probably meet this month to discuss the financial study.

Mimeographed newspapers showed up on NYC evening commuter trains last week. The Central (at the suggestion of NYC News Director Dick Marshall) stepped in to fill a gap when a city-wide newspaper strike halted deliveries to newsstands. Associated Press bulletins were fed to the NYC "newsroom" by special arrangement, and the road turned out 20,000 copies the first day for homebound commuters.

A new direct cable link between Canadian Pacific's head offices in Montreal and the company's Trafalgar Square offices in London was inaugurated this month. It's the first step toward an eventual world-wide hook-up of CPR's communications to handle the company's integrated land, sea and air transportation.

Order of Railroad Telegraphers, locked in a bitter fight with C&NW and M&StL over station consolidations, has agreed to consolidation programs involving six stations on two other railroads—Milwaukee and Burlington. ORT's latest move in its dispute with C&NW is an appeal to the U.S. Supreme Court, in protest against a strike-delaying injunction issued in federal district court and a refusal by the U.S. Court of Appeals to vacate the injunction.

CLASSIFIED ADVERTISEMENTS

Rates: $10 per column inch (1" deep x 1⅝" wide)
Equipment used or resale acceptable in this section

FOR SALE
REBUILT
RAILROAD CARS FOR INTERPLANT USE
GONDOLAS • BOX • FLAT
ERMAN-HOWELL DIVISION
LURIA STEEL & TRADING CORP.
332 South Michigan Avenue
Chicago 4, Illinois
WEbster 9-0500

Robert W. Hunt Company
ENGINEERS
Inspection—Tests—Consultation
All Railway Equipment
General Offices:
810 S. Clinton Street
CHICAGO 7
All Principal Cities

APPRENTICE TRAINING
Since 1909, The Railway Educational Bureau has trained men for a number of our major railroads. We furnish the text, questions and grading service for all technical instruction covering 3- or 4-year programs. These are raising the skill and efficiency of 3000 apprentices today. The Bureau is staffed and its texts authored by railroad men. Information is available describing methods used and fields covered. Also special courses are available for individual employees seeking advancement. THE RAILWAY EDUCATIONAL BUREAU, 1809 Capitol Avenue, Omaha 2, Nebraska.

ADVERTISERS

American Steel Foundries 45
Arthur Equipment Co. 53

Bethlehem Steel Co. 3
Bird & Son, Inc. 19
Buffalo Brake Beam Co. ..... Inside Front Cover

Cardwell-Westinghouse Co. 33
Caterpillar Tractor Co. 35
Classified Ads 53
Coward-McCann, Inc. 51

Erman-Howell Div. of Luria Steel & Trading Corp. 53
Exide Industrial Div. of Electric Storage Battery Co. 28

General American Transportation Corp. 37
General Chemical Div. of Allied Chemical & Dye Corp. ..... Back Cover

Hunt Co., Robert W. 53
Hyatt Bearings Div. of General Motors Corp. 4

International Business Machines 39

Kaiser Aluminum & Chemical Corp. 29

Magnus Metal Corp. 8
McGraw-Edison Co. Clark Div. 46
McGraw-Edison Co. Tropic-Aire Div. 49
Miner, W. H., Inc. 27
Motorola Communications & Electronics, Inc. 43

Oakite Products, Inc. 51

Pittsburgh Coke & Chemical Co. 30
Portland Cement Association 23

Railway Educational Bureau 53
Reynolds Metals Co. 18

Servo Corp. of America 14
Scintilla Div. of Bendix Aviation Corp. 42
Standard Car Truck Co. 22
Standard Railway Equipment Co. 31
Symington-Gould Corp., The ..... Inside Back Cover

Tamper Limited 16. 17
Toledo Terminal Railroad Co. 53

Weiss B. M. Co. 53

Youngstown Steel Car Co. 11
Youngstown Steel Door Co. 6

REBUILT

RAILWAY CARS

70 TON GONDOLA CARS

50 TON GONDOLA CARS

70 TON HOPPER CARS

IMMEDIATE DELIVERY

ARTHUR EQUIPMENT CO.
P.O. BOX 274
CHICAGO HEIGHTS, ILL.
Phone SKyline 5-9030

FOR SALE
TWO 1000 HP SWITCHERS TYPE ALCO DIESEL-ELECTRIC LOCOMOTIVES IN EXCELLENT CONDITION
THE TOLEDO TERMINAL RAILROAD CO.
1214 Cherry Street
Toledo 4, Ohio
Cherry 1-9131

KEEP BUYING U. S. SAVINGS BONDS

LOCOMOTIVES & LOCOMOTIVE CRANES
1—25 Ton Diesel Electric Locomotive
1—45 Ton G.E. Diesel Electric Locomotive
1—25 Ton Ohio Diesel Locomotive Crane
1—30 Ton Browning Diesel Locomotive Crane
1—25 Ton Bay City 190T61 Truck Crane
B. M. WEISS COMPANY
Girard Trust Bldg.
Philadelphia 2, Pa.

Looking for a job?
Looking for a man?
use this space to
get reliable leads
quicker results
EMPLOYMENT OPPORTUNITIES
SECTION
Railway Age, 30 Church St., New York 7, N. Y.

Push the Search for Talent

A large railroad recently took inventory of its officer-and-supervisor needs of the next 10 years. What it found was not especially comforting. A minimum of 754 men, from foreman upward, will be leaving or retiring within the decade.

Merely selecting and transplanting the successors to these men will be a vast job. But making certain the **right** man is obtained in each case is even more crucial. On this railroad, as on all of them, future success and growth hinge on more than just promoting men into new job titles.

Railroads have as much need for superlative top management and quality supervision as any other industry. However well they may have fared up to now, the intensity of their competitive problem makes it imperative that every job be filled with the best possible talent. They must not overlook any opportunity, now, to improve their strength for the future.

Nothing less than preserving and assuring the future of the railroad enterprise is at stake. Just as in any other business, people can kill it or make it go.

The fact that management development takes time and money, and may not pay off in tangible returns next month, simply can't get in the way.

Fortunately, there is increasing evidence that this matter of tomorrow's management is getting the attention it deserves. A good 30 railroads already have qualified personnel men working on this problem. Five years ago there were less than a dozen.

These personnel officers have been at their jobs long enough now that some clearly defined approaches are evident. Labor relations specialists, whose responsibilities are in quite another area, are less apprehensive now than some of them once were that systematic management development activity will complicate labor relations. Fewer charges of "fadism" are being leveled at this work, and there is growing evidence that initial suspicions of some line officers is quieting down.

In short, things have reached the point where results are beginning to show up. Take the case of a road that catalogs its supervisors. The job doesn't stop there. The follow-up must include thorough-going job analysis, testing, appraisals, training and coaching—all aimed at making certain the men who move up in the organization will have the skills and talents needed to put the railroad on a prosperous course and keep it there.

This kind of work, this search for trainable and promotable brainpower, runs to every department of a railroad. Hence, the job being done is company-wide. The men who have been assigned these tasks are staff officers. As such, they can guide the wagon but they aren't the horses. Both top management and line officers must make these development plans their own property if any good is to come of them.

A definite responsibility weighs on today's executives to find, train and bring along successors, not to themselves alone, but at all levels in the company. This is a job that can be pushed aside by the urgency of more immediate problems. Doing so, however, is borrowing trouble. Money spent now that will help avoid future mistakes is one of the soundest investments any railroad can make.

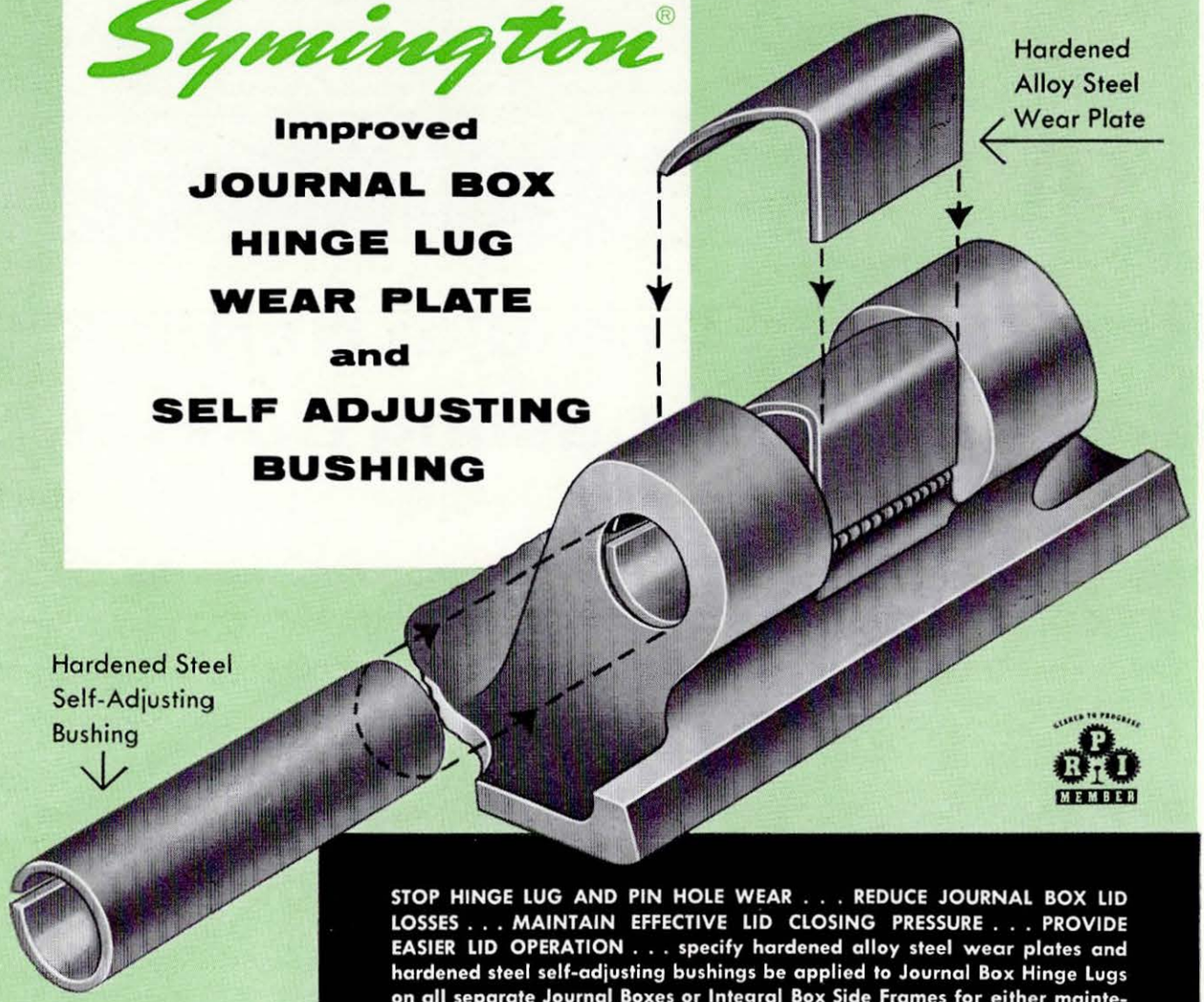
THIS GROUP DESERVES SUPPORT: The band of staff officers engaged in management development work has created an informal organization—the Railroad Personnel Development Group—which has held annual meetings for six or seven years. They've kept their sessions off-the-record, so they could compare notes in greater freedom. Now they've decided to remove the wraps. News of their activities will become more readily available. Railroad executives and department heads will be doing themselves and the railroads a favor to give these competent personnel officers all the understanding cooperation they can.

OVER A QUARTER OF A MILLION CARSETS ON 42 U.S. AND CANADIAN RAILROADS . . . 18 PRIVATE CAR LINES

AN OUTSTANDING RECORD OF SERVICE FOR

Symington®

Improved JOURNAL BOX HINGE LUG WEAR PLATE and SELF ADJUSTING BUSHING



STOP HINGE LUG AND PIN HOLE WEAR . . . REDUCE JOURNAL BOX LID LOSSES . . . MAINTAIN EFFECTIVE LID CLOSING PRESSURE . . . PROVIDE EASIER LID OPERATION . . . specify hardened alloy steel wear plates and hardened steel self-adjusting bushings be applied to Journal Box Hinge Lugs on all separate Journal Boxes or Integral Box Side Frames for either maintenance or new equipment. They are available and applied by all manufacturers of Side Frame and Journal Boxes.

A.A.R. Alternate Standard—See Manual page D-15-A.

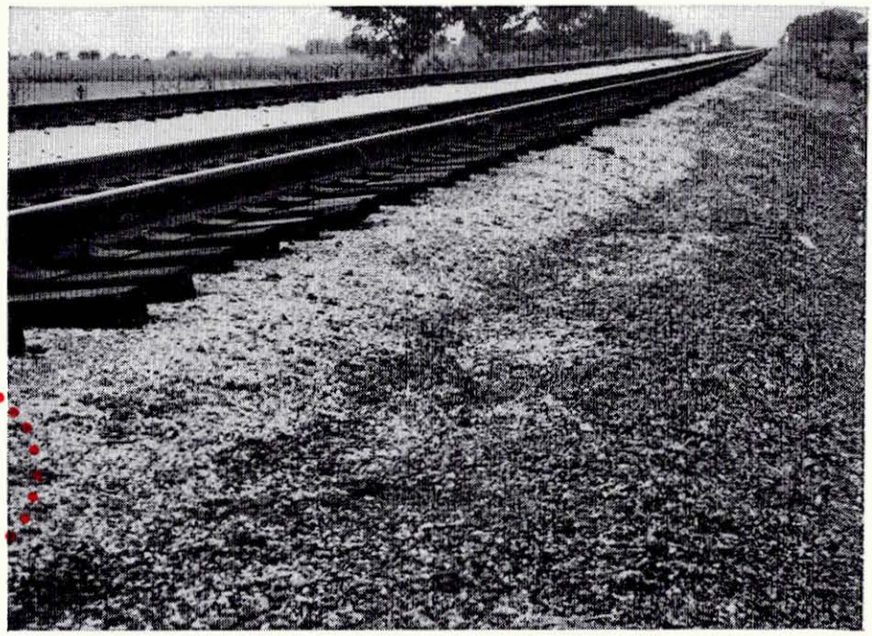
THE Symington-Gould Company

DIVISION OF SYMINGTON WAYNE CORPORATION

WORKS: DEPEW, NEW YORK

New York • Chicago • St. Louis • Boston • San Francisco • In Canada: ADANAC SUPPLIES, LTD., Montreal, Quebec

WEED CONTROL by UROX®



Sensational Granular Herbicide Gives Longer-Lasting Control... *at Lower Cost!*

Railroads all over the country are finding they can control weeds and brush faster, easier, for a longer time and at lower cost with General Chemical's UROX Weed Killer.

Long-term control! Even in areas of heavy rainfall, UROX will usually maintain control of weeds for an 8-month period. In areas of lighter rainfall, control may remain effective for as long as 18 months after a single application.

Effects are cumulative! UROX tends to build increasing soil sterility. Its herbicidal action can thus be extended from one year to the next with small booster doses. As smaller and smaller amounts are used over a period of time, you realize substantial savings.

Amazingly effective! Granular UROX is a "root-seeker." Apply it to dense vegetation or heavy top growth—the granules roll off leaves onto the ground, where killing ingredients penetrate the soil and are absorbed by plant roots. Also, UROX controls so many different, stubborn weeds that there's no need for separate herbicidal treatments. UROX does the *entire* job!

You get fast results! You can see control in as little as 10 to 14 days.

Cuts labor costs, too! Fewer applications . . . no mixing . . . cumulative effects—they add up to significantly lower costs. What's more, you can apply UROX in the winter, when many maintenance crews are idle.

Get the whole story! Write today for our new full-color UROX folder, "Candidly Speaking." You'll see the unretouched, candid-camera evidence of UROX's effectiveness in many widely separated geographical areas, many different climatic conditions. We'll be glad to send you your free copy on request.

Allied Chemical

GENERAL CHEMICAL DIVISION
40 Rector Street, New York 6, N. Y.